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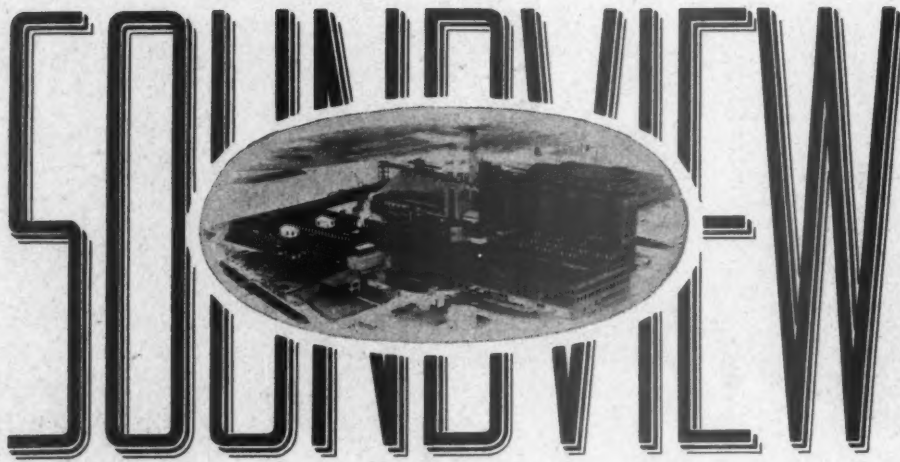


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Progress of Manpower Release Program

Survey of critical skills completed, shows 9,983 men in Washington and Oregon pulp and paper mills possess 31,648 skills, an average of more than three each. Industry already releasing skilled men to other war industries. If job shift is carried out through U. S. Employment Service men retain seniority in the mills.

IN what is perhaps its most important contribution toward efficient conduct of the war, the Pacific Coast Association of Pulp and Paper Manufacturers has completed a survey of skills among 9,983 male employees in the pulp and paper mills of Washington and Oregon, and already the so-called "direct" war industries have drawn many men from this important manpower reservoir.

This skill survey disclosed that these 9,983 men possessed 31,648 skills, an average of more than three skills each, all of them regarded as "critical" in the conduct of the war.

The most surprising revelation of this survey was that it showed a number of these workmen were not employed at their highest skills. For example, a pool of scores of welders available for jobs in shipyards and other "direct" war industries was disclosed in the reports as turned in by all the member mills in the two states.

This survey was part of the voluntary manpower release plan proposed by the Pacific Coast Association of Pulp & Paper Manufacturers and the two major labor organizations recognized as the representatives of men and women employed in the industry in July, and approved in August by the War Manpower Commission, the United States Employment Service and the Selective Service Directors for Washington and Oregon. The entire plan was published in the September issue of PACIFIC PULP & PAPER INDUSTRY.

It is said to be the first plan for the transfer of skilled workmen to war industries in an orderly, intelligent manner, with consideration for the need of the industry retaining enough skilled men to maintain its production of essential materials.

The manpower shortage in the Pacific Northwest is said by some concerned with solving it to be more of a problem of placing the right man in the right job than one of numbers of men. There would be no labor shortage in this area, they

believe, if every man worked at his highest skill in a war industry.

The pulp and paper industry's plan aims to release skilled men from the mills to other war industries when and where they are needed. The medium through which the exchanges are being made is the U. S. Employment Service which now knows, for the first time, how many skilled men are available in the pulp and paper industry. It was a pioneer venture on the part of the mills and organized employees and will no doubt be followed by other industries.

The plan preceded the "freeze" order for logging and lumbering and non-ferrous metals in which the pulp and paper industry was included by definition, having been inaugurated in August. Now that the "freeze" order has been lifted, as far as this industry is concerned, this plan will carry on. In the opinion of most informed observers, it is a far more practical method than the "freeze" order for keeping essential or key men on their jobs in the mills and at the same time giving efficient aid to the war effort. It should serve to relieve much uncertainty among both employers and employees in the mills by tending to establish a considerable security for mill jobs of an essential nature.

The plan also provides security for the employee after the war. If his transfer from the mill to a war industry is accomplished through the U. S. Employment Service and he stays on the war job for the duration, or does not change to another without the consent of the service, he retains his seniority at the mill and the right to return upon the completion of his war job.

When the "thawing" of the manpower "freeze" in the industry was announced by government officials, it was officially explained that this move was made in order to allow for a special voluntary manpower program operating under the critical skills survey. This manpower contribution program has been ap-

proved by General McSherry, director of the war man-power commission in Washington, D. C.

The skills survey was made at the request of the U. S. Employment services in Oregon and Washington and management and labor agreed that "if a worker is not employed at his highest skill in the pulp and paper industry, he would be released for transfer to some other employer engaged in war production work who needs someone possessing that skill."

If the worker agrees, the employer would grant him a leave of absence, providing the employee takes the assigned job from the U. S. Employment service. Only skilled workers who leave under such conditions will receive leaves of absence, protecting their jobs for the duration of the war.

The plan works out in a way that is beneficial to both employer and employee in the pulp or paper mill and to Uncle Sam.

For instance, take the hypothetical cases of two men who revealed in their questionnaires that they each had ten years of experience as a machinist. Say that one man was the operator of a paper machine and the other was an employee in the wood room. If a machinist was needed in a shipyard or an airplane plant, the latter would be the one to go. The one operating the paper machine would be considered as employed at his highest skill and so would be kept on the job in the paper mill.

While the questionnaire was identical with the one used under the selective service act, it is far more useful in that the survey discloses in what localities and in what mills the critical skills may be found.

Already in some Washington mills, the U. S. Employment Service has located needed electricians and welders for the "direct" war industries. The survey recently made it possible for the Kaiser shipyards to obtain a list of a large number of draftsmen whom they can contact through the U. S. Employment Service. The PACIFIC PULP AND PAPER INDUSTRY expects to publish detailed reports in future issues on how the plan is meeting demands for manpower through the U. S. Employment Service.

Following are the number of skills as shown in the completed reports as of late October, and listed in order as they appear in the familiar draft questionnaire:

Airplane fabric worker, 11
Airplane mechanic, 41
Airplane pilot, 37

Airplane woodworker, 8
Angle puncher and shearer, 4
Architect, 14
Armorer, 4
Asbestos worker, 48
Assembler, aircraft, 27
Assembler, electrical equipment, 18
Assembler, instrument, 8
Assembler, machinery, 95
Assembler, other, 43
Automobile mechanic, 733
Babbitter, 34
Bench hand, metal work, 49
Bessemer-converter blower, 2
Blacksmith, 165
Blaster, 33
Blast-furnace operator, 6
Boatbuilder, wood or steel, 76
Boiler mechanic, 82
Boring machine operator, metal, 27
Boring mill operator, 16
Briclayer, 63
Burner, acetylene, 248
Cabinetmaker, 135
Cable splicer, 122
Calker, steel plate, 24
Canvas worker, 9
Carman, railroad shops, 57
Carpenter, 1360
Cement finisher, 172
Chemical operator, 72
Chipper, metal, 34
Cloth cutter, 2
Compass man, logging, 74
Cooper, 9
Coremaker, 28
Crane operator, 298
Detailer, drafting, 39
Die maker, 22
Diver, 9
Draftsman, 201
Dredgeman, 30
Drill-press operator, 241
Dynamic balancer, 1
Electrician, 489
Electric-motor repairman, 46
Emergency man, street R.R., 5
Emergency squad worker, fire or gas company, 7
Engineer, locomotive, 63
Engineer, operating, 97
Engineer, professional, 62
Engineer, refrigerating, 26
Engineer, stationary, 285
Engraver, 7
Estimator, construction, 26
Explosives operator, 65
Farmer, dairy, 536
Farmer, other, 1373
Farm hand, dairy, 455
Farm hand, other, 1080
Farm machinery repairmen, 265
Filer, metal, 43
Filtration plant attendant (water), 73
Fingerprint expert, 12
Finisher, rolling mill, 10
Fire fighter, 266
Fireman, locomotive, 239
First Aid attendant, 214
Fixer, machine, 21
Foreman, factory, 443
Forger, 8
Forge welder, 13
Flanging press operator, 2
Furnace charger, metal, 5
Galvanizer, iron and steel, 5
Gas-producer man, 3
Gear cutter, 9
Glass blower, 17
Glazier, 25
Grinder, precision work, 32
Grooving-machine operator, 5
Gunsmith, 13
Hammersmith, 2
Hardener, 3
Heat treater, 7
Heater, forge, 13
Hostler, railroad, 58
Inspector, 139

Inspector, machinery parts, 27
Instrument makers, 2
Instrument repairman, 52
Internal keyseating machine operator, 17
Interpreter, 12
Lapping-machine operator, 6
Lathe operator, 258
Lay-out man, 35
Lead burner, 42
Leather worker, 23
Lens grinder, 2
Lineman, 100
Loftsmen, 6
Loom fixer, 3
Lumber grader, 202
Machine operator, firearms, 10
Machine set-up man, 2
Machinist, 412
Maintenance mechanic, 362
Melter, 7
Metallurgist, 10
Milling-machine operator, 84
Millwright, 863
Miner, 226
Model maker, 18
Molder, 25
Motor analyst, 13
Motorcycle repairman, 44
Motorman, locomotive, 23
Multipurpose-machine operator, metal working, 3
Ornamental iron worker, 4
Ordnamenceman, 11
Painter, ship, 235
Parachute repairer, 2
Patternmaker, 15
Personnel man, 71
Pipe fitter, 627
Pipe man, water or gas main, 68
Planer operator, metal, 78
Plasterer, 36
Plater, 9
Plumber, 171
Policeman, 79
Pourer, foundry, 12
Power house operator, 75
Power shovel operator, 47
Press operator, 73
Press operator, metal, 19
Printer, 99
Pulpit man, steel mill, 2
Radio operator, 38
Radio repairman, 64
Repairman, office machines, 3
Repairman, R.R. equipment, 94
Rigger, 259
Riveter, 101
Roller, metal, 2
Sawing machine operator, metal, 17
Screw machine operator, 12
Seaman (including river boats), 251
Shaper operator, metal, 98
Sheet metal fabricating machine operator, 4
Sheet metal worker, 118
Ship fitter, 48
Ship's officer or engineer, 36
Steam fitter, 95
Stonemason, 25
Straightener, metal, 6
Structural-steel worker, 41
Surveyor, engineering, 112
Telegraph operator, 27
Telephone man, 56
Template maker, 8
Tester, 237
Textile-machine operator, 39
Thread grinder, 5
Tool dresser, 20
Tool-grinder operator, 11
Tool maker, 7
Tracer, drafting, 69
Trainman, 134
Transformer rebuilder, 7
Tube bender, 1
Upholsterer, 14
Watchmaker, 8
Weaver, 26

Welder, 311
Wheel borer, 5
Wire drawer, 5
Woodworking machine operator, 262

In addition to the above the 9,983 employees listed 4,882 "jobs or fields of work in which you have had experience or training."

Professional and scientific workers checked off 995 skills divided as follows:

Accountant, 162
Administrative official, 77
Architect, other, 4
Bacteriologist, 19
Biologist, 12
Budget analyst, 7
Chemist, 189
Dentist, 1
Economist, 15
Engineer, aeronautical, 2
Engineer, chemical, 90
Engineer, civil, 27
Engineer, electrical, 37
Engineer, industrial, 32
Engineer, metallurgical or mining, 6
Engineer, mechanical, 52
Engineer, radio, 5
Engineer, refrigerating or air conditioning, 13
Geographer, 5
Geologist or geophysicist, 5
Historian, 6
Horticulturist, 8
Lawyer, 4
Mathematician, 33
Metallurgist, 7
Personnel Manager, 53
Physician, 1
Physicist, 20
Physiologist, 3
Psychologist, 1
Social worker, 6
Sociologist, 6
Statistician, 26
Veterinarian, 2
Other professional or scientific occupation, 59

Crown Willamette Paper School Streamlines Work

● The paper school at the Camas mill of the Crown Willamette concern is offering new courses to its students and has gone in for considerable streamlining of its curricula.

The new courses offered are "Human Relations in Industry," "Labor Relations" and "Job Instructor Training."

The school has mapped out nineteen weeks of instruction instead of sixteen as in the past. The third and fourth year classes have been combined because so many of these students have gone into the military services. There are about 100 men in the services who would have been in the school. The two classes combined are taking what was the fourth year course, including instruction in the paper and converting mills. Next year it is planned that the combined groups take what has been the third year of instruction.

It is quite a feat these days to be working at Camas and also going to the school. Some employees are putting in as much as 56 hours weekly in mill or shop and additional five hours in the Crown Willamette Paper School.

British Columbia Pulp Offers Bond Interest Payment Plan

● A plan for providing for liquidation of arrears of interest that fell due on and before May 1, 1942, and for deferment of interest accruing between May 1, 1942, and May 1, 1945, until November 1, 1945, will be submitted to holders of British Columbia Pulp & Paper Company's 7 per cent general mortgage sinking fund gold bonds at a meeting to be held shortly in Montreal.

The plan calls for payment of \$430,917 in cash within the next year and postponement of further regular interest payments until November 1, 1945. The settlement reflects improvement in the company's financial position in recent years.

In the three years ended December 31, 1941, the company brought interest payments on first mortgage bonds up to date; met three semi-annual coupons on general mortgage bonds and in addition increased net working capital from \$143,469 at the end of 1939 to \$960,679 at the end of 1941.

As to the liquidation of interest arrears the plan provides that all unpaid interest which originally fell due on the bonds on or prior to May 1, 1942, and interest thereon shall be funded and paid by:

1. The issue to each bondholder of additional bonds to the extent of 40 per cent of the principal amount of his bonds and
2. The payment in Canadian funds to each bondholder of 35.22 per cent of the principal of his bonds, whereof 18 per cent shall be paid in 1942 and 17.22 per cent in 1943, such funding and payment to be a full satisfaction and discharge of such unpaid interest and interest thereon.

The plan also provides for the modification of the bonds, including the additional bonds to be issued, so that principal and interest shall be domestic-pay only, instead of Canada-U. S.-Britain, as hitherto.

Interest accrued between May 1, 1942, and May 1, 1945, would be postponed and becomes payable on November 1, 1945, with interest on such overdue interest accruing from each maturity date at 7 per cent per annum, the company to be accorded the right to make prepayment from time to time of any one or more maturities on 30 days' notice.

In dollar terms the plan for liqui-

dation of arrears works out as follows:

On the basis of \$1,223,500 7 per cent general mortgage bonds outstanding, new bonds will be issued to the amount of \$489,400 and an amount of \$430,917 will be paid in cash, of which latter \$220,230 in 1942 and \$210,687 in 1943.

For the individual holder of a \$1000 bond the plan provides for (a) issue to him of \$400 principal amount of new 7 per cent bonds, (b) payment to him of \$352.20 in cash (Canadian funds), of which \$180 to be paid in 1942 and \$172.20 in 1943, (c) modification of the bonds, including the new bonds to be issued, to a domestic-pay basis instead of triple pay, and (d) the deferment until November 1, 1945 (unless the company's right of prepayment be exercised) of the interest falling due on November 1, 1942; May 1, 1943; November 1, 1943; May 1, 1944; November 1, 1944, and May 1, 1945.

Adoption of the extraordinary resolution at the bondholders' meeting will require an affirmative vote of 75 per cent of the principal, amount of bonds represented at the meeting.

Camas Control Lab Loses Men to Services

● Twenty-three out of 60 employees in the technical control department at the Camas mill of the Crown Willamette Paper Company, division of Crown Zellerbach Corp., have gone into the armed services.

Five women have been employed as pulp testers at Camas up to November 1st. Despite the heavy loss of staff to the services, G. H. Gallaway, acting technical supervisor, said his department has lost no key men so far.

Lieutenant Sherman Attending Sub-Chaser School

● Lieutenant Edgar C. Sherman, U.S. N.R., formerly assistant technical supervisor, National Paper Products Division, Crown Zellerbach Corporation, Port Townsend, is now attending the Navy's sub-chaser school at Miami, Florida.

In July, 1941, Lieutenant Sherman, then an ensign, was called to active duty. He was assigned to the Naval Section Base at Port Townsend in September, 1941, and a year later ordered to report to Key West to attend the sound school. From there he is to report to Miami for training in the handling of sub-chasers. Lieutenant Sherman is a graduate of the University of Washington where he took four years of naval R.O.T.C. work.

A Quickly Applied Wire Patch

From 5 to 8 minutes is all the time necessary to apply the fourdrinier wire patch used by J. A. Harris, Paper Mill Superintendent, Crown Willamette Paper Co., Division of Crown Zellerbach Corporation, West Linn, Oregon.

THE need for conservation of critical metals and of man hours in the pulp and paper industry emphasizes the importance of new processes and improvements on former techniques. The strategic metals used in fourdrinier wires require that a maximum of productive life be obtained from each wire. Another conservation angle of importance—now as never before—is that of manpower. Anytime a job can be done at a saving of man hours over other methods it is a definite accomplishment. If a new practice, method, or technique also results in fewer and shorter shut-downs it assumes first rank importance. Such is the distinction of the fourdrinier wire patch used by Mr. J. A. Harris, paper mill superintendent, Crown Willamette Paper Company, Division Crown Zellerbach Corporation, West Linn, Oregon.

Anticipating wear and tear on the fourdrinier wires, Mr. Harris makes up the patches in advance. When a hole occurs he is ready, and since the patch design permits quick application, the job is done with a minimum of man hours, of lost production and with the making of very little bad paper. At the same time he extends the life of the wire, saving critical metal.

Mr. Harris recommends using these patches over round holes or tears in a fourdrinier wire, but does not think they should be used for covering a crack in the wire. The principal advantage of Mr. Harris' patch over sewed patches is the great saving of machine time. These patches require from five to eight minutes to apply as compared to about ninety minutes for the sewed patches. The object of patching is to make temporary wire repairs to permit continued operation the rest of the week, until Sunday, when the operation is regularly shut down for repairs and maintenance.

Mr. Harris has this to say about the life of his patch, "We figure we are doing pretty well to get one week's operation. The patches are used to keep the wire and paper machine going until Sunday when we are shut down anyway. If a hole appears in a wire we patch it immediately and would plan on either

putting on a new wire, a new patch of the same type or reinforcing the old patch with sewing wire during our Sunday shutdown."

Making the Patch

● Here is a step by step series of illustrations showing Mr. Harris making a patch and using it to patch a hole in a small piece of fourdrinier wire as a demonstration for PACIFIC PULP AND PAPER INDUSTRY. Describing the operations pictured:

(1) First it is necessary to pick the appropriate mesh for the fourdrinier wire. The patch should be about 5 points finer mesh than the fourdrinier wire so the short warp wires projecting from each end of the patch will be small enough to enter the mesh. The next step is to cut out a piece of wire of sufficient size to make the desired patch. Figure 1 shows a piece of 60 mesh wire from which has been cut a patch "blank," shown between the right thumb and forefinger. When this blank was completed and applied over a hole in a wire it was a patch approximately three-quarters of an inch square.

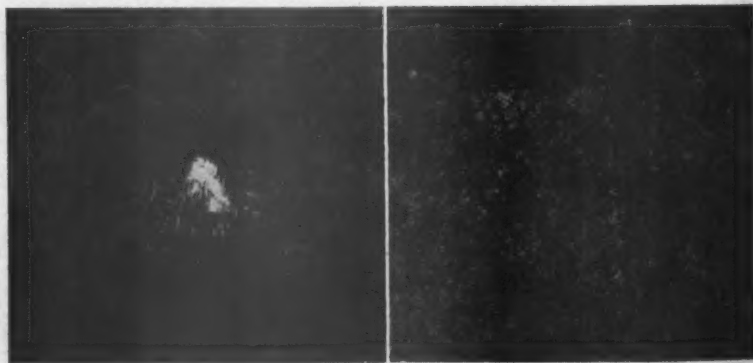
(2) The next step is to remove four shute wires at both ends of the blank, which is done with a pair of semi-sharp, flat-faced tweezers (Figure 2).

(3) After the shute wires are removed every other warp wire protruding from the mesh of the blank is cut off, halving the number of these projections. To conveniently

accomplish this Mr. Harris inserts a dentist's nerve probe into the place formerly occupied by the fourth shute wire (Figure 3). As the probe is advanced it separates the alternate wires, so half are on each side of the probe. One of these groups of short warp wires protruding from the mesh is bent over the right angle edge of a straight stick and pressed down with the blade of a pocket knife (Figure 4) so the warp wires, which are to be cut off, will assume the right angle of the board. Now that the warp wires are projecting at right angles to those which are to be left intact, a pair of scissors is used to cut off the wires (Figure 5). After these are sheared off it is necessary to hook the remaining stubs back over the fifth shute wire with a pocket knife locking it in place. The patch blank is next placed on the flat side of the stick and a wooden mallet used to hammer flat the hooked stubs (Figure 6).

(4) Next comes the most touchy part of the job, according to Mr. Harris, which is straightening the projecting warp wires remaining. Flat-faced tweezers are used for the first part of the operation, which consists of taking hold of the wire (with the tweezers) right next to the mesh, and pulling out, slipping the tweezers off the end, straightening the kinks one wire at a time (Figure 7). It is essential that the wires be straight, not just turned ninety degrees, so the kinks lie in the other plane.

When the wires do turn it is nec-



NEWSPRINT BEFORE and AFTER PATCHING the WIRE. As the mark of the wire patch on the newsprint is almost invisible in reflected light, these pictures were taken by transmitted light to show the even formation over the patched area.

essary to straighten each of them by inserting a pair of sharp pointed tweezers between the strands, pulling out with the tweezers, slipping off the end of the warp wire. It is desirable to use a hand lens in this step to more clearly identify the kinked wires (Figure 8). It is necessary to observe each wire to see that it doesn't twist while being straightened.

(5) The steps outlined and described are now repeated on the other end of the blank. After both ends are unraveled, thinned, and straightened, the warp wires of one end are bent over at right angles, using the same straight-edged board, which was used before as a form, and another similar board as tools to bend the wires (Figure 9), thus

completing a spare patch which is shown in Figure 10. It is now ready to be placed on a damaged fourdrinier wire. (Figure 11) shows patch and a piece of a fourdrinier wire with a hole).

For purposes of illustration the prepared patch was placed over a hole about 5/32-inch in diameter in the piece of fourdrinier wire and an



FIGURE 1—Mr. Harris prepares a wire patch from a piece about 5 points finer mesh than the wire to be patched. Tools include shears, dentists' nerve probe, semi-sharp flat faced tweezers,



sharp tweezers, knife, magnifying glass, stick and wooden mallet. FIGURE 2—Four shute wires are removed from each end of the patch with the semi-sharp tweezers.



FIGURE 3—Nerve probe inserted in place of fourth shute wire, separating the alternate warp wires, half on each side of probe.



FIGURE 4—One set of protruding warp wires is bent to right angle over edge of stick by knife.



FIGURE 5—Cut these off with the shears. Hook remaining stubs back over fifth shute wire with knife locking them in place.

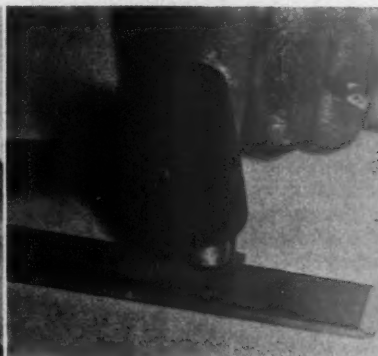


FIGURE 6—Patch is placed on flat side of stick and bent stubs of cut off warp wires hammered flat with wooden mallet.



FIGURE 7—Straighten the remaining warp wires. First use flat faced tweezers, gripping next to the mesh and pulling, slipping tweezers off the ends straightening the kinks one wire at a time.



FIGURE 8—If the wires turn, use sharp pointed tweezers to return them to original position by pulling tweezers off the ends. Use magnifying glass to make sure wire doesn't twist while



end is being straightened. Repeat Figure 1 to 8 on opposite end of patch. FIGURE 9—Warp wires of one end of patch are bent to right angle over straight edge of stick.

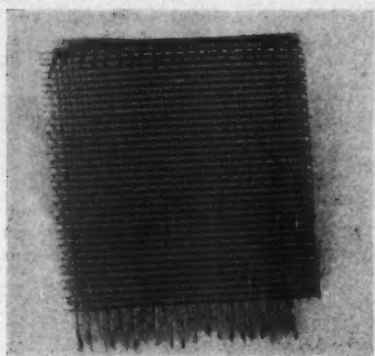


FIGURE 10—Closeup of completed patch ready to be placed over damaged spot in fourdrinier wire.



FIGURE 11—Patch and hole in sample wire.



FIGURE 12—Patch is mounted on top

arrow drawn indicating direction of theoretical travel.

Applying the Patch

(1) The patch is mounted on the topside of the wire (lengthwise with the wire) by inserting the straight ends of the warp wires through the mesh of the fourdrinier wire (Figure 12). It should be noted that these warp wires must be inserted close enough to the hole that the patch will cover the hole when pressed down on the wire. The ends protruding on the underside of the fourdrinier wire are hooked back in the opposite direction from the travel of the wire. If the patch is located near the middle of the wire where it is not conveniently possible to hook these wires back, Mr. Harris runs the wire slowly over the suction box to hook back the protruding patch wires. He recommends bending them over by hand when possible.

(2) After the warp ends are hooked over, the patch, which at this stage is standing at right angles to the fourdrinier wire, is tilted over

until it lies flat on the wire, covering the hole (Figure 13). It is important that the warp wires, which are at right angles to the rest of the patch, enter the mesh of the wire as the patch approaches the same plane as the wire. When the patch comes in contact with the wire it is already secured at the first end inserted into the mesh and is now ready to have the protruding warp wires, of the second end, clinched beneath the fourdrinier wire. These are also hooked away from the direction of travel.

(3) The final step is to smooth down the wires protruding from the underside of the wire. Figure 14 shows this being done with a wooden mallet. In actual practice Mr. Harris runs the patch onto the edge of the suction box where he pounds the patch down flat. Figure 15 shows J. A. Harris with his completed Victory demonstration patch.

The greatly enlarged photograph of the underside of the patch, showing how the warp wires are hooked through the mesh, appears on the front cover.



FIGURE 13—Patch is pushed down on wire and protruding warp wires of patch already bent at right angles enter mesh of wire as patch approaches same plane as wire. These are bent away from direction of wire travel underneath wire.



FIGURE 14—Patch is pounded down tight with wooden mallet. In actual use the patch is run onto the edge of the suction box where it is hammered flat.



FIGURE 15—J. A. HARRIS, Paper Mill Superintendent, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., West Linn, Oregon, and his finished Victory Patch.

and lengthwise of wire by inserting straight, projecting warp wires into mesh. Ends are hooked back in opposite direction to wire travel.

Weyerhaeuser Men Go To War

● The Weyerhaeuser Timber Company Pulp Division at Longview reports the following additional enlistments and inductions of employees into various services during September and October:

C. F. Miller, chip plant foreman, has joined the Seabees, construction battalion of the U. S. Navy. Roy Countryman has gone into the Army Air Force and J. S. Bachman, D. M. Hardin, L. W. Miner and George Theuner into the Army. The Navy acquired Theydon Demas and Philip Young and to the Coast Guard went N. N. Lepin and Clifford Beck.

Wakeman Succeeds Winton As Head of Pulp, Paper Branch

● The appointment of Arthur G. Wakeman as chief of the Pulp and Paper Branch of the War Production Board was announced on October 14th. Mr. Wakeman had been serving as deputy chief under David J. Winton, who recently resigned on the grounds that curtailment orders about to be placed in effect would reduce production by Pacific Coast pulp and paper mills in which he is a stockholder.

Prior to joining the WPB in March Mr. Wakeman was production manager for the Fox River Paper Company of Appleton.

Manpower Problems, Beater Control Discussed at Pasc Meeting

THE first fall meeting of the Papermakers & Associates of Southern California and the last before gasoline rationing becomes effective, was held at Carl's Restaurant October 23rd. Chairman Charles G. Frampton in welcoming the members and guests for the evening pointed out that the difficulties ahead arising from the rationing of gasoline and subsequent curtailment of travel for everyone may make a considerable difference in the December 12th meeting and subsequent meetings of the organization. He noted that the Pacific Coast superintendents' group had suspended its activity for the duration for this reason.

Well attended, the October meeting was featured by two excellent talks. David Babcock, vice-president of Blyth & Co. of Los Angeles, and in the war program, employer advisor for the Area War Manpower Commission, addressed the group on the manpower problem and the course it is shaping for industry. Frank Wheelock, board mill manager at the Vernon plant, Fibre-board Products Inc., read a paper entitled, "Beater Room Control."

Prior to the speakers, Richard S. Buckley, secretary-treasurer of the PASC, read the minutes of the last meeting of August 20th, and reported that membership totaled 46 out of a mailing list of interested papermakers of 96. A program to stimulate membership was authorized.

Chairman Frampton called on Robert A. Baum, who heads up the educational committee, for a report on the work of his group. Mr. Baum reported that the course in Pulp and Paper Technology, supported by PASC in a resolution drawn up at the June 18 meeting, which was to have been given at the University of Southern California under the auspices and with the financial backing of the United States Office of Education, will not be given due to the withdrawal of financial support by the federal educational office.

The meeting was then turned over to the program chairman of the evening, George Ford. Mr. Ford introduced Mr. Babcock who presented an enlightening view of the manpower problem and how the government is moving to solve it.

Comments On Manpower Problem

Up to recently, Mr. Babcock stated the efforts of the War Manpower Commission in this area have centered on the two vital war industries: aircraft and shipbuilding. With the tremendous expansion of the aircraft industry and the rise of shipbuilding, the manpower problem was one primarily of education. Not enough instructors were available. Out of this situation has grown, he stated, a new idea, known as "Job Instructor Training." (See pages 38-42, September Pacific Pulp & Paper Industry.) This is a ten-hour course given to the managerial personnel of plants in the critical war industries. The higher up the ladder of personnel, including if possible the president, this instruction course reaches, the more satisfactory have been the results, he declared. Its purpose is not to teach skills, but to teach the skilled managers, superintendents and foremen how to pass their knowledge and their skill on to new workmen and to old workmen who need to learn. It has proved invaluable and is going ahead in plants throughout the country.

How critical the manpower situation has become was emphasized by Mr. Babcock in detailing the figures of workers gainfully employed and their relation to critical war work. There are 1,650,000 workers in Los Angeles County, of these 640,000 are in what, under the present crisis, are regarded as non-essential fields. He stated he could not give the figures of selective service due to go from this group, however, 400,000 people in this area will be needed in war industries. There are 35,000 available now, an additional 200,000 women are expected to be put into industries, and this leaves a shortage of 150,000 people. These must come from the non-essential industries group.

The transfer from non-essential to critical war industries will be on a voluntary basis to start, but if this does not bring the desired result, it will be done on some involuntary basis. Dependency will be no excuse.

Manpower will be frozen, he stated, with people required to stick to their work with due consideration of such factors as having the man

with a given skill in the job best suited for that skill and other factors such as nearness from his home to the work, etc. It will be a tremendous recruitment problem.

Two other phases of the Manpower Commission work lie in two other types of courses. The one, "Job Methods Plan," trains men to look at their job and try to find a better means of doing it. This does not mean that outside people come in and suggest changes within a plant in methods, but means the training of men on the job to study their own job with the end in view of bettering it from their own experience and thinking.

The other course, titled, "Job Relations Training," is an attack on the manpower problem through educating leaders in a plant to handle their people properly. Many man hours are lost through the careless relationship of foreman to worker, his thoughtlessness and lack of tact. This is an effort to save these hours through training these men to know how to get along with their people and handle them most effectively.

Absenteeism is another major problem, he said, in the current industrial scene. Enough man hours are lost each week through absenteeism in the shipbuilding industry alone to build two cargo vessels, one destroyer and one small naval vessel weekly. Strenuous efforts are being made to check this. It is expected that industry will be required to give weekly lists of absentees through labor management committees or union groups. These men will be investigated, urged to keep on the job, and if they have not legitimate claim to absence such as illness, and if the practice continues, then their names will be submitted to the draft boards for action there. The Army will step in and with a few examples thus set, the belief is absenteeism will become less of a problem.

Questions and Answers

● The meeting was then thrown open to questions. The question was asked, "Hasn't General Hershey disapproved this use of the draft as a punitive measure?" Answer: "I believe you will find soon that the Selective Service Board and the War Manpower Commission will be combined in this respect."

Question: "With the accident rate rising due to new workers isn't it true that the safety problem is related to the attitude of the workers? And such being the case what has the educational work of your commission done to help this?"

Answer: The Job Instructor Training course has shown substantial results in training plant leaders who in turn have been able to improve this attitude you mention and thereby decrease accidents and build up safety programs."

Question: "You say our industry is not regarded as a critical war industry. We understand that the Selective Service Board has ruled that the packaging, cooperage and similar container manufacturing businesses are regarded as essential. Can you explain this contradiction?"

Answer: "We are asking each industry to develop 'manning tables.' By this we mean a table of all men in your factory with complete data on each as to years of service, replaceability, value as a key man, an exact and honest grading of his status in your plant. Then the War Manpower Commission will attempt to draw only those men out of industries who can be spared."

Question: "How about freezing men in jobs?"

Answer: "What we want to do is to stop the high rate of turnover now being experienced in the critical war industries."

Question: "Has anything been done to educate draft boards on what constitutes a 3-A or 3-B man?"

Answer: "There is a lot of educating needed every place. There are 90,000 deferments in this area. There shouldn't be as many as 20,000. One plant has 19,000 deferments, 62 per cent of the male workers. Remember any man who is deferred and who is of draft age and otherwise should be in the service, is loaned and the loan may be called at any time. We will bend over backward to leave the key men."

"In closing," said Mr. Babcock, "I should like to say that we have been losing this war to date, we have not reached the turning point yet, and if it is necessary to win it, we may all have to work 16 hours a day seven days a week."

Chairman Ford then introduced Frank Wheelock who read a paper (reproduced elsewhere in this issue) on "Modern Beater Room Control." Mr. Wheelock's paper was well received and its excellent good humor added considerable interest to the problem therein treated. A forum followed during which the technical men discussed the prob-

lems of beater room control as projected by Mr. Wheelock.

Chairman Frampton announced that a group of friends of U. Grant Farmer, who passed away suddenly last summer following his taking office as chairman of the Papermakers organization, were assisting in the settlement of his estate by raffling off his very fine set of golf clubs, golf bag and gear. George H. Boeck was in charge of the proceedings. The lucky number went to Gene Ridings, foreman of salvage and housekeeping at Fibreboard Products Inc., Vernon plant. Mr. Ridings was not present, but reportedly is a "great" golf player and is expected to set a fine pace with the clubs.

Door prize winner was Joseph Scheuermann of Chicago, representative of the Cameron Machine Co., who is in the west on an extended trip.

Those attending were as follows: Willard G. Axtell, Fibreboard Products Inc.; Robert A. Baum, Fernstrom

Paper Mills; William Belleman, Pioneer Flintkote Co.; George H. Boeck, Oakite Company; Bruce F. Brown, Sr., Fibreboard Products Inc.; Bruce F. Brown, Jr., Fibreboard Products Inc.; Richard S. Buckley, Fernstrom Paper Mills; Max E. Campbell, U. S. Gypsum Co.; Robert E. Cooper, Pioneer Flintkote Co.; Roy Culp, Pioneer Flintkote Co.

Frank E. Dilley, Pioneer Flintkote Co.; Frank Eggert, California Oregon Paper Mills; George Ford, Fibreboard Products Inc.; Charles G. Frampton, Fernstrom Paper Mills; J. E. Hartford, U. S. Gypsum Co.; J. W. Jamison, Fernstrom Paper Mills; William A. Kinney, Pioneer Flintkote Co.; Parke F. Math, California Ink Co.; Stanley Parker, Fibreboard Products Inc.; L. I. Ramsey, Adhesive Products; Otto Sass, Pioneer Flintkote Co.; Ernst Swanberg, Fernstrom Paper Mills.

W. T. Tillotson, U. S. Gypsum Co.; John Van Ounsem, Pioneer Flintkote Co.; Frank H. Wheelock, Fibreboard Products Inc.; George Zenick, Pioneer Flintkote Co.; A. M. Turner, Schumacher Wall Board Co.; K. H. Bearss, Philadelphia Quartz Co.; W. M. Monette, The Dicalite Co.; Elmer Lemire; Asger Eilersgaard, Pioneer Flintkote Co.; M. Moss, Fernstrom Paper Mills; Harold Mearns, The Dicalite Co.; Cal Wood, Pacific Pulp & Paper Industry.

The Research Job Isn't Done

ALTHOUGH the Pulp and Paper Branch of the WPB has lately established a War Products Development Section and appointed an excellent advisory committee of technical men, the industry ought not assume that the problem of developing new wartime uses for paper has been entirely disposed of by letting the government take the lead.

Both the need and the opportunity for cooperative private research still exists. A legal method of pooling private corporation research work during the war is exemplified by the Plastic War Production Association, described in the October issue of "Modern Plastics." Quoting:

"A group of eastern plastics firms with headquarters at 122 East 42nd Street, New York City, has been certified by the WPB as a war production association appropriate in form and character to the fulfillment of the objectives of the War Production Board. The certification has been formally approved by the Attorney General.

"The purposes of the PWPA, as expressed in their announcement, is to pool the engineering, research and manufacturing facilities of their members for the benefit of the various Government branches placing war contracts. Facilities of PWPA members are widely varied as to types of work, and include presses,

machinery and finishing equipment capable of producing such items as fuze bodies (various types), uniform insignia, helmet liners, gas mask valves and guards, machine gun grips, pistol grips, gun stocks, bayonet scabbards, shell components, range finder indicators, horse and mule mask parts, crystal holders, bomb release brackets, aircraft fairlead insulators, signal lamps and numerous other things needed in the war effort. In most instances plastics is replacing in such items critical metal materials needed in other applications.

"One of the most important functions of the PWPA will be to develop through research and experimentation, and in close cooperation with the various Procurement Offices of the Armed Forces, new applications of plastics which will result in substantial and necessary conservation of vital metals."

It would seem that such an organization would possess one outstanding advantage in pursuing research and development, an advantage to the war program and to the concerns participating; namely, the shortcutting of the bureaucratic red tape that inevitably retards government agencies.

The leaders of the pulp, paper and paperboard industries should fully consider this method adopted by a progressive group of plastics manufacturers.

SOME time ago your program committee advised me that, through an unfortunate choice—probably similar to the choice of our draft boards—I had been selected to address you on a rather healthy subject, "Modern Beater Room Control." So I am going to do my best to keep the subject as healthy as I was while eating this enjoyable meal.

Tonight you are really in for a treat when you awake at the end of my paper. These gentlemen here alongside of me will answer any and all questions with me playing the interlocutor? You remember the interlocutor who says, "No, Mr. Bones, I don't know." They have especially asked that these questions be made difficult as they do not care to answer such simple queries as, "What is hydration?" "How can you make a sheet of high test board from 100 per cent mixed waste?" "Is paper really made in the beaters?"—etc. By the way I owe an apology to a large group of you gentlemen for the experiences and theories presented here tonight represent cylinder machine operation only; and any resemblance to a Fourdrinier job is purely coincidental.

I have been in several board mills during the past seventeen years and yet I am sorry to say that I have never discussed Beater Room Control with anyone with the single exception of a pleasant conversation held one Saturday morning several years ago with my colleague John Van Ounsem.

I am afraid you gentlemen may think that I am wandering quite a bit from my subject when I start talking of the board machine, but to me Beater Room Control is the liaison of the furnish-stock preparation equipment and use, paper machine and machine tender.

We all know and realize that for want of a fiber a sheet may be lost but I do not believe enough paper-makers realize the elasticity of most of our cylinder machines. We can lower the level inside the cylinder and raise the level of the stock outside, thus greatly increasing the differential pressure or forming head. Or conversely, we can raise the internal and lower the external stock level and by these simple or complex moves change greatly the quality of our formation, and the results are naturally reflected in the physical qualities of our sheet. Or,

Modern Beater Room Control

by FRANK H. WHEELOCK*

if our drying capacity will permit, we may increase speed, thus changing the apparent freeness of our stock. By these changes we are able to widely vary our sheet characteristics, provided throughout all these variations we were receiving identical stock from our modern controlled beater room.

I think you will agree that given the same fibers and non-fibers in our furnish, the same stock preparation and equipment, the same temperature, pH and consistency on the same machine with the same machine conditions, the reproducibility of physical character of our resulting wet mat will be very similar, even though we might greatly change these characteristics in the consequent pressing, stretching, drying, re-wetting and calendering operations.

So we now arrive at the crux of beater room control. The efficient supervisor of the modern beater room should be working quite closely with the machine tender so that the stock arrives at the machine head box in such a condition that it may be used to the greatest advantage in order to produce the sheet required to comply with its specifications.

What do I mean by this? We are all familiar with the frequent complaint of some machine tenders that the man following them "changes everything on the machine." Generally speaking these machine changes are the reasons that make necessary the changing of the incoming stock.

Now may I side with the machine tender. As long as papermaking remains an art I do not believe it behooves anyone to say that there is only one way to produce a sheet on a cylinder machine. The technique of each tender embraces good and bad practices which tend to balance off and yet the net may result in the same sheet quality.

I am not so theoretical either

that I think there is only one way to make a sheet on each machine with each furnish. For progress must come from eternal change and experimentation.

In these cases I speak of, the machines are making a wide and considerable variety of grades.

First, A Good Supervisor

To translate what I have said into one cylinder words—the modern beater room supervisor is first a GOOD SUPERVISOR, which might even mean a good psychologist. But by far the greatest contribution of the supervisor is the proper preparation of the furnish in order to meet the maximum requirement of the sheet, and then to sell the stock thus prepared to his machine tender.

If the stock preparation is good, then the machine tender will soon learn that his beater foreman understands the preparation of stock for the fabrication of a sheet to comply with all necessary specifications when used by him, and some measure of happiness will result.

In too many mills there is not sufficient beater room control to economically use size and alum, nor to watch carefully the consumption of power and the effect of this power use upon the fibers and the resulting sheet quality. And in board mills we now arrive at the jack pot in savings—the proper evaluation and use of our waste paper. If we carefully watch the mixed waste used in connection with sorted grades our modern beater room controller will vary these combinations in order to get the maximum financial benefit from the wide variety of waste received.

I do not believe too much time can be spent on the careful selection and use of mixed waste paper. May I emphasize: If a mill possesses excellent beater control, that is a proper evaluation and use of waste paper; it is most fortunate. And a

"I believe," says Mr. Wheelock, "that a cylinder machine and beater operation would be most successful if a machine tender, who previously had training in stock preparation and the use of available furnish, was actually in personal and direct control of the beater room with a subordinate operating the wet end of the machine. In other words, I am asking for a beater foreman who is an expert machine tender and is in charge of the forming section of his machine."

*Board Mill Manager, Vernon Division, Fibreboard Products, Inc., Los Angeles. Presented at the meeting of the Papermakers and Associates of Southern California, October 23, 1942.

beater supervisor who thinks his work is done by the simple expedient of freeness tests, pH determination and the like—is missing the boat.

We should be quite thankful that we are past the era when a machine tender thought a pail of alum would solve most of his troubles and two pails all of them. Yet at this point let us not overlook the effect of pH and total acidity on formation or sizing. And again let's pay respects to the alert old time machine tender who first sensed changes in formation resulting from these variations even though they might be clouded by wide stock variation.

Comparisons are odious, but they often present a story. When we attempted to establish a measured beater room control we simply made a record of freeness, consistency and pH maintained during production of a given sheet, and by these observations set up a measure of our most pronounced variables. After a year of data gathering, we were prepared to reproduce these conditions, which previously had been secured by the beaterman feeling a handful of stock, or the machine tender closely observing variation of forming head or variation of foam and so forth.

We who are cursed with a single stock preparation equipment, find ourselves too often in a position where we would like to maintain fiber length during defibering only to realize that in order to completely defiber waste paper our equipment will actually reduce fiber length. Or conversely having machines for satisfactory defibering we are unable to either fibrilate or cut the stock. So at best our equipment must be a compromise; unless we are indeed the fortunate board mill which does not make a variety of grades and yet has equipment flexible enough to prepare high quality stock for each grade manufactured.

A Good Example

A few years back I was fortunate to visit the beater room of a board mill where control had reached a high degree of perfection.

The liner furnish was defibrated and dropped by batch into a chest. From this chest the beater room supervisor was able, while standing at his testing bench, to pump the stock for any number of passes through a series of jordans or refiners; until the desired reduction of fibers was accomplished. Freeness readings on the stock were made on an ordinary Schopper-Reigler tester, and then the result-

ing mat was couched off, dried, consistency determined and corrected for in the chest and as a last step of quality control, a tear test was made on the resulting hand sheet in order to further correct the freeness test to reflect bending quality in the resulting boxboard.

You may have noticed that I have mentioned only freeness readings as a measure of control of stock preparation. From my own observation, freeness readings may be made so much faster than projection of slides or other measures and a supervisor can be trained so much more quickly that he may expend the majority of his time in the study of machine variables and stock variable instead of laboriously translating into numerical values something he sees or measures with his eyes.

Power Consumption

As another item of savings, second only to proper use of waste paper, or size and alum, we have power consumption.

Power is a wide variable mill to mill, both in K.W.H. per ton demand or cost per K.W.H. of electricity.

In mills that buy most of their power stock preparation power may amount to as much as three to four dollars a ton while in the more fortunate plants who generate all power consumed, this same power consumption might not cost over fifty cents. Here again let us not make the mistake that because our power generation is cheap that it may be wasted; for in the very mills that generate all their power, the tonnage is usually large, thus the power saving, even though small per ton, may be considerable when contemplated from an annual financial report.

For those mills that purchase their electricity and are confronted by excessive costs for stand-by power or demand, the intelligent supervisor may often so distribute beater and jordan load that the power demand variation is at a minimum.

Reports Are Necessary

Quite necessary in modern beater room control are reports. First of course, are the complete and accurately kept records of weights and kinds of materials used in each beater. These act as a check for the supervisor in watching the loadings of each beater and of course are the foundation for accurate costs.

Second to these records but no less important are the results of the various tests made by the supervisor. These, when properly kept, will be quite valuable as a reference

to guide the future duplication of present runs.

I think you gentlemen who are operating fourdrinier machines should enter into the discussion following this paper so that we cylinder machine operators may get an insight into your problems even though widely different from ours, and I also hope that one of you will volunteer to give a paper on modern beater room control from the fourdrinier operator's point of view.

Tonight I have laboriously tried to evade the suggestion of our secretary that I might even remotely touch on the eternal problem "as to whether paper is actually made in the beater." But as a straw in the wind we can contemplate the modern southern kraft mills that make their paper or board stock in beater rooms which are devoid of beaters and contain only jordans or refiners. The use of continuous stock preparation equipment results in economy of labor, maintenance and power consumption over the results obtainable from batch equipment.

Not that I care to assume the role of a prophet but from a Jules Verne eye view of the future, I believe that a cylinder machine and beater operation would be most successful if a machine tender, who previously had training in stock preparation and the use of available furnish, was actually in personal and direct control of the beater room with a subordinate operating the wet end of the machine. In other words, I am asking for a beater foreman who is an expert machine tender and actually is in charge of the forming section of his machine.

Failing this, our crying need is for understanding, patient machine tenders, or beater supervisors who can convey clearly to the machine tenders the many problems which confront them.

Another phase that I have skipped tonight is the actual difference of furnish, beater room equipment and varied use of this equipment. For a thorough and intelligent discussion of this phase I leave to a brighter intellect and smoother tongue, as I now find mine both rough and dry.

Now we have arrived at the point in our evening where we both are relieved. I have finished my paper and you gentlemen may now ask your questions and I will assure you that your end men will be ready, able and willing to answer any or all questions put to them on the subject of modern beater room control.

● The Puget Sound Pulp & Timber Co. reports \$428,429 net profit for the first nine months of 1942, after providing \$1,837,964 for Federal taxes. Net profit for the period was equal to \$1.16 per common share; tax provision equalled \$5.62 a share.

For the comparable period of 1941 revised net profit of \$761,501 represented \$2.18 per common share, after taxes of \$1,448,311 which equalled \$4.43 a share.

Pulp production of 128,169 tons constituted an increase of 26,186 tons over the comparable 1941 period. Net sales of \$7,328,500 scored a gain of \$1,392,638. Earnings before tax provisions were \$2,266,393, or \$56,581 higher than in the first nine months of 1941.

Anticipating higher tax rates in the 1942 revenue act, in the third quarter the company increased its tax provision to 80 per cent of operating earnings. This rate consumed \$505,717 as taxes on third quarter earnings of \$627,709; and \$131,095 additional was provided for taxes against earnings of the first six months.

Acute situations involving manpower, log supply and transportation facilities prevent continuance of capacity operations by the company, notwithstanding the fact that the Pacific Coast pulp and paper industry was recently declared an essential industry by the War Manpower Commission.

Pulp production at the Bellingham plant was reduced to 75 per cent of capacity on October 1, 1942, and to about 50 per cent on November 1st. These curtailments complied with requests of the War Production Board and permitted allocation of manpower and logs among other essential war industries.

Effect on fourth quarter net profits should not be in full proportion to output reduction, the company's report states, since the only earnings affected are those subject to 90 per cent excess profits tax.

Change in the trend of United States wood pulp production and consumption was clearly indicated in the third quarter of 1942, President Fred G. Stevenot told stockholders in the Puget Sound Pulp & Timber Co.

Around mid-year monthly gains were smaller than in the early months, and in July and August both production and consumption of all grades combined were below tonnage of those months of 1941; September showed slight increases over last year.

Puget Sound Reports Reduced Net Profit

At October meeting directors took no action on the common stock dividend due to (1) reduction in log supply caused by allocation of domestic logs and Canadian embargo on exports of logs, (2) decrease in operating personnel caused by release of workers to other essential industries, and (3) the Federal tax outlook as it appeared at the time the directors met. Plant now operating at 50% of capacity.

This change came about through outside influences: reduced manpower for mill operation and logging; price control which affects profits most seriously in high-cost mill and logging operations; limitation of land and ocean transportation facilities.

Due to record operation in early months, the year's production and consumption will be at high figures, but it appears unlikely that the 1941 record will be eclipsed.

Production, all grades combined, of about 7,800,000 tons in the first nine months of 1942, was approximately 500,000 tons above the corresponding months of 1941. Imports, estimated at 850,000 tons for nine months, were about 50,000 tons ahead of that period last year. Nine months' exports are believed to have been around 270,000 tons, about 25,000 tons more than a year ago.

Domestic consumption, in excess of 8,300,000 tons for the nine months, showed approximately 525,000 tons increase over the 1941 period.

Unbleached sulphite production for nine months, exceeding 950,000 tons, was about 100,000 tons ahead of the comparable period of 1941; imports, estimated at 300,000 tons, represented 70,000 tons increase; exports of 75,000 tons were 30,000 tons higher than in the 1941 period; domestic consumption, close to 1,200,000 tons, was more than 130,000 tons above the first nine months of 1941.

In September the entire domestic industry operated at about 91 per cent of capacity, compared with 86 per cent in July, 89 per cent in August, and with around 100 per cent, January through April. The Company's Bellingham plant operated at full capacity through September.

PUGET SOUND PULP & TIMBER CO. OPERATING SUMMARY First Nine Months, 1942

Provision for Federal taxes on operating profit for the 1942 period, as shown in this tabulation, is at the rates anticipated in the Revenue Act of 1942, and is subject to possible revision. Comparative

tax and net profit figures for 1941 are revisions of originally published figures, giving effect to higher Federal tax rates applied retroactively in that year.

	January-September		Increase or Decrease in 1942 Period
	1942	1941	
Production, tons	128,169	101,983	26,186
Average daily production, tons	475	378	97
Sales, tons	127,256	104,037	23,219
Net sales	\$7,328,500	\$5,935,862	\$1,392,638
Operating profit before depreciation	2,643,874	2,513,851	130,023
Depreciation	377,481	304,039	73,442
Profit before Federal tax provisions	2,266,393	2,209,812	56,581
Provision for Federal taxes*	1,837,964	1,448,311	389,653
Net profit	428,429	761,501	333,072
Net profit per share outstanding September 30:			
Preferred Stock	7.64	13.53	5.89
Common Stock	1.16	2.18	1.02

*At the rate of 80 per cent of profit before Federal tax provisions in the 1942 period and 65.5 per cent in the 1941 period. These tax provisions were equal

to about \$5.62 per common share in the 1942 period, and to \$4.43 in the 1941 period.

Canadian Newsprint Industry Under Permit System

Creation of a pooling fund into which mills operating above a basic level will make payments and out of which mills closed down or curtailed in operations will receive payments in lieu of orders for newsprint, follows British practice and may presage system to be applied to all American industry.

● British Columbia's newsprint industry, along with its counterpart in the eastern provinces, is now operating under a permit system applied as from November 1st by newsprint administrator R. L. Weldon, formerly president of Bathurst Paper Company, who spent several days on the Pacific coast last fall.

Copies of the order, issued through Canada's Wartime Prices and Control Board, have been received by all companies affected. The newsprint producers in British Columbia are Powell River Company and Pacific Mills, Ltd.

Officials of the board gave these assurances following issuance of the order:

1. The permit system has been established as an enabling step, leaving the way open for future action which may be necessary:

2. There is no present intention of using the permit or other authority to impose restrictions on the size of newspapers by curtailing supplies, whatever may be necessary in the future.

Informed sources said progressive orders covering the newsprint industry have provided an indication of board action in respect to other industries in carrying out the program designed to conserve manpower and materials.

Last Sept. 2nd the industry was placed under an allocation system, with the newsprint administrator charged with distributing production and shipments among the various mills as fairly as possible, keeping in mind over-riding war requirements. A special pooling fund has been created into which mills operating above a basic level will make payments, and out of which mills closed down or curtailed in operations will receive payments in lieu of orders for newsprint.

Board officials would say nothing as to the possibility of the permit system being extended to other industries. But other sources said that through a system of permits to all industries, the closest possible control could be maintained.

Those refusing to obey board curtailment orders or other orders simply would have their permits withdrawn.

Commenting on the new permit system for newsprint, Mr. Weldon said the order was designed "to facilitate control required in regulating transfers of tonnage and compensation involved."

"In order that allocation may proceed in an orderly manner all newsprint companies under my jurisdiction have been granted permits," he said.

More than 90 per cent of all newsprint manufactured in Canada is exported, and the new permit system applies equally to exports and domestic requirements.

Joseph Bradete, liberal member of Parliament for Cochrane (Ontario), suggested recently at a meeting of a House of Commons subcommittee on war salvage that the size of newspapers might be reduced to conserve newsprint.

There has been no indication from official quarters that such a restriction is being considered.

Since the war started the demand for newsprint, particularly in the United States, has fallen off to such an extent that the industry in Canada is operating at between 60 and 70 per cent of capacity.

In the allocation and curtailment program being carried out by the prices board, the location of the newsprint mills—including the possibilities of alternative forms of employment for workers in mills where operations may be curtailed—is taken into consideration. The location may also decide whether power can be spared from war industries to permit newsprint operations to continue at previous levels.

Officials of the board said that there might be further curtailment of newsprint and magazine paper production following enforcement of an order issued October 30 restricting output of mills to the April-September, 1942, average. Indications are that Pacific Mills will

be chiefly affected inasmuch as its production during that period was reduced owing to power shortage and scarcity of labor. It is hoped that the company may receive some compensating concessions in view of these unusual circumstances.

Delivery of Canadian newsprint has been limited to a 90-day supply. Products of Canadian fine paper and specialty mills have been under the restriction for some time.

According to the board, the purpose of the order is to pave the way for such further curtailment of paper production as may be necessary, to release power, transportation, labor and critical materials to more essential war production.

Canada's action was worked out in full co-ordination with United States authorities who imposed similar restrictions on mills in the United States.

The order provides that no manufacturer shall—without the authority of the administrator—fail to make delivery of newsprint or magazine paper to the extent he can do so within the scope of the limitations placed by the order, to any customer with whom he was doing business this year.

It is also provided that the administrator may, by written permit, grant "such exemption or relief in whole or in part from any provision of this order as he may deem proper in any particular case or cases, having due regard to the public interest."

Detroit's Big Telephone Directory

● The new telephone directory for Detroit is the largest under one cover in the country, says the Wall Street Journal. To save paper (32,400 pounds of it) Michigan Bell Telephone cut thousands of two line listings to one. Such titles as Miss and Mrs. disappeared. Robert became Rob't. The book's more than 1,584 pages contain 450,000 listings.

The 675 copies required 3,800,000 pounds of paper, 58,650 pounds of ink, 49,200 yards of cloth. The paper used was a salvage job; it came from the July, 1941, issue, picked up when the January issues were delivered.

WPB Closes Three Pacific Coast Pulp Mills

THE following official statement dealing with the War Production Board's curtailment of pulp production in the Puget Sound area, was released on October 24th:

"The need for safeguarding essential pulp production is reflected in Schedule 1 to General Preference Order M-251, which restricts operations of Puget Sound pulp mills. Copies of the schedule were mailed yesterday (Oct. 23) to the mills affected.

"The shortage of manpower in the Puget Sound area, the restriction of importation of Canadian pulpwood, and the increasing diversion of pulp logs for lumber purposes have culminated in severe restrictions in pulp production in the Puget Sound area.

"Following a series of conferences between the War Production Board, War Manpower Commission, other Government agencies and representatives of the Puget Sound mills, it was decided that definite steps must be taken to make sure that the shortage of manpower and pulp logs would not imperil the production of high alpha and dissolving pulps going into essential nitrating, rayon and photographic uses. To this end, it has been decided to withhold logs from and restrict deliveries of pulp by the Tacoma mill of the St. Regis Paper Company, the Anacortes mill of the Scott Paper Company and the Tacoma mill of Rayonier Incorporated effective November 1.

"These actions, together with the curtailment of production in other pulp and paper mills in the area, will release about 1,100 men for re-employment in war industries, and their transfer will be expedited by the United States Employment Service.

"For the months of November and December, pulp production along the entire Pacific Coast will be authorized only for the purpose of supplying high alpha and dissolving pulps, consumed by Far Western states. (This paragraph in the original release was corrected the same day to read, "For the months of November and December, pulp production along the entire Pacific Coast will be authorized only for the purpose of supplying high alpha and dissolving pulps, pulps for Lend-Lease and exports requirements, and pulp for the pro-

duction of paper consumed by Far Western states."—Editor).

"In consequence, the allocation of wood pulp for November under General Preference Order M-93 prohibits the movement of all grades of domestic paper pulp to their normal Midwestern and Eastern markets. The only pulp moving East will be high alpha and dissolving pulps which are consumed largely in the rayon industry and in the nitrating plants for ordnance purposes.

And curtails operations of other Puget Sound pulp and paper mills with exception of those making dissolving and nitrating pulps exclusively . . . Reasons given: Shortage of manpower in Puget Sound area, Restriction of imports of logs from British Columbia, and increasing diversion of pulp logs for lumber purposes . . . During November and December paper pulp shipments eastward are prohibited.

"As many non-integrated paper mills are largely dependent upon Pacific Coast pulp producers for their supplies of pulp, the Pulp and Paper Branch of the War Production Board was obliged to take steps to prevent an unwarranted dislocation in the paper industry. These steps included the allocation of Eastern, Lake States and Canadian pulps to domestic consumers where needed to replace part of the shipments cut off from the West Coast. This will result in a general reduction of pulp inventories in the hands of non-integrated pulp consumers.

"As there is every prospect that West Coast shipments may be eliminated for the duration, with the exception of deliveries for essential war purposes, it is evident that the paper industry is faced with the necessity of making considerable readjustments in its use of wood pulp.

"The action to concentrate and control production in the Puget Sound area is based upon General Preference Order M-93, providing for the allocation of wood pulp, and on General Preference Order M-251, which was issued October 19th. Under the latter order, whenever the Director General for Operations determines that there exists in any area a shortage in the supply of pulpwood required for the production of essential products, he may exercise specified controls, including allocation and directions as to the use of pulpwood in such area.

"Schedule 1 to M-251 is a declaration that a shortage exists in the Puget Sound area and that logs are

allocated in that area for the month of November. The provisions of M-251 may later be extended to other areas in which critical shortages develop."

Following the issuance of the order the American Paper & Pulp Association said in part in a letter to its members:

"Based on data compiled by the United States Pulp Producers' Association for the calendar year 1941, it would appear that at least 50 per cent of the domestic sulphite and sulphate pulp sold in the United States was produced by West Coast pulp mills. In the case of sulphite pulp, the domestic sales of paper grades produced on the West Coast exceeded 50,000 tons per month during 1941, while only approximately 6,000 tons per month of the sulphate pulp sold in the United States were of West Coast origin.

"The total apparent United States consumption of paper grades of sulphite pulp in 1941 averaged 263,000 tons per month, of which 86,000 tons were domestic pulp sold in the United States. Similar figures for sulphate pulp show an apparent United States consumption of 368,000 tons per month, of which only approximately 27,000 tons were domestic pulp sold in the United States."

● It will be noted that the mills closed are units of large operations. By this first order the WPB did not put any one company out of business. It is reported that the WPB originally planned to shut two other pulp mills which would have put one company entirely out of business. As the WPB has not as yet developed any plans for compensating closed or curtailed concerns, it apparently recognized the unfairness of such action at this time.

It will also be noted that the WPB achieved the closure of the three plants and curtailed the operations of others in the Puget Sound area by exercising control over raw material and shipping. As-

Mayor Cain's Protest

● In his telegram of protest to Donald Nelson of the WPB on October 27th against the closing of the St. Regis mill, Mayor Harry P. Cain of Tacoma said in part:

"Closure of the St. Regis Paper Company of Tacoma has been ordered and if imperatively necessary this move would not be opposed by the local management or by me, but can you justify the obvious destruction of a multi-million dollar physical plant and the loss of approximately 400 trained and able technical workers?"

"If you need the plant six months from now it would likely cost large sums to place it in operating condition and the personnel would have scattered to the four winds.

"To justify the closure you must be absolutely certain that there will be no possible need for its plant facilities for the duration. It doesn't seem reasonable that your advisers could have been certain for they have inferred otherwise.

"The management and the plant are a substantial part of Tacoma's economic structure, but there will be no antagonism over the loss if you can convince us that what is being done makes sense."

Harry P. Cain, Mayor,
City of Tacoma.

sumption of control over all pulpwood logs in the area preceded allocation to those mills producing pulps and papers deemed by the WPB as more essential to the war effort than those made by the mills closed. The WPB's allocation of shipments of all pulps completes the Federal government's war time control of the industry.

St. Regis Closing Protested

● On October 25th the Associated Press carried a dispatch from Tacoma quoting St. Regis' vice-president, Walter DeLong, as saying the company would fight the WPB closure order on the basis that the bleached kraft mill in Tacoma is now equipped to turn out the very war products now being sought by the government from such mills.

"The government wants unlimited quantities of nitrating pulp for use in munitions and the St. Regis plant at Tacoma is qualified to make such pulp," Mr. DeLong declared. He added that the mill has all of the necessary equipment on hand and that it could start installing it at once if necessary and that the reason nitrating pulp has not been made there so far is that "we have not been asked for it."

Roy K. Ferguson spent the following week in Washington in an effort to have the closure order rescinded

before the November 1st deadline.

Mayor of Tacoma Harry Cain wired Donald Nelson, head of the WPB, protesting against the closing of the St. Regis mill and received a reply from Ernest Kanzler, director general for operations of the WPB. The telegrams exchanged accompany this story.

Protests were without avail. The WPB stood firm, amplifying its reasons for the closing only to the extent revealed in Mr. Kanzler's wire to Mayor Cain.

St. Regis May Outfit Ships

● The three mills closed down as ordered. Maintenance crews went to work immediately to place all equipment in condition to resist corrosion during the shutdown of indefinite duration. As far as the condition of the equipment is concerned all three mills will be ready to start on short notice.

From the standpoint of crews it is another story. It is felt that it would be virtually impossible to resume operation of the mills closed for the duration because of the dispersal of the crews into other jobs.

The St. Regis Paper Company is considering plans for utilizing the mill's modern machine shop, excellent docks and large storage facilities in some line of direct war work, possibly the outfitting of ships. A

shortage of outfitting facilities exists on Puget Sound. If it is decided to engage in such work, and at this writing no decision has been announced, a large proportion of the pulp mill crew will be kept busy at the plant.

Columbia-Willamette Area Log Control

● Machinery for the control of distribution and use of pulpwood was established by Order M-251, issued October 6th by the director general for operations of the WPB, Ernest Kanzler.

The order also provided that producers of wood pulp must file monthly reports showing receipts, consumption and inventory of pulpwood for each mill which they operate.

The first such report was required on November 5th, and reports must be filed by the 5th of each month thereafter. For mills located in the states of Washington and Oregon, Form PD-661 is to be used, and for mills located elsewhere in the United States, Form PD-656.

Other sections of the order provide for allocation of pulpwood to follow such determinations as may be issued by the director general to require the establishment of reserve supplies of pulpwood and to limit or prohibit particular uses of designated types in any area where a shortage is found to exist. The director general is further authorized by the order to require any person to whom an allocation of pulpwood is made to use it for specific products or purposes.

Schedule No. 1 under Order M-251 dealt with the allocation of pulpwood logs in the Puget Sound area. Schedule No. 2, issued October 27th, extended the area of pulpwood control to the Columbia-Willamette area. It provides that the director general for operations may from time to time allocate specific quantities of pulpwood logs to and from specific persons in the Columbia-Willamette area.

Fourteen mills are located in this latter area and until they receive further directions from the director general for operations, they may continue to consume or dispose of pulpwood as though Schedule No. 2 had not been issued.

Action is necessary, says the WPB statement, because a certain amount of logs now consumed in pulpwood will probably have to be diverted to lumber in the Columbia-Willamette area, due to a shortage of lumber logs.

Restrictions, have not of this date, November 12th, been applied to mills in the Columbia-Willamette area.

Paper Production Restricted

● A mild freeze of paper and paperboard production was put into effect November 1st by the War Production Board, when announcement was made on October 30th that production until further notice must not exceed the rate of the six months period from April to September 30th, 1942. The Canadian government simultaneously issued a similar order.

This preliminary curtailment will permit paper mill operations to continue at about 87 per cent of theoretical capacity and paperboard at 78 per cent of capacity. Domestic newsprint production will be cut about 5.15 per cent it reported, and Canadian production will drop about 6 per cent.

The WPB declared its expectation that "further curtailments would have to be made in the near future," to release labor, power, transportation and materials for war purposes.

In the week ending October 31st paper production was 92.9 per cent of rated capacity, according to the American Paper & Pulp Association's weekly production to ratio chart. Paper board production was 84 per cent of capacity, according to the National Paperboard Association.

From a high point of 104.5 per cent in January paper production dropped to a low of 75.8 per cent in July, while paperboard's high of 102 per cent in January declined to the low point of 68 per cent in July.

The order banned the production of paper or paperboard by any mill which has not produced them since August 1, 1942.

Exempted from the calculation of past or current production are building papers, building boards, vulcanizing fiber stock, resin impregnated stock (used for a variety of recently developed papers but which the Associated Press referred to as "the base of a plastic product newly coming into use as a substitute for zinc in photo-engraving"), and sanitary napkins and hospital wadding stock.

Another exception to the freeze order is made in cases where one person owns only one mill equipped with only one machine. Such an individual mill may produce during the calendar week any quantity of paper and paperboard required to

Mr. Kanzler's Reply

● In his October 31st reply to Mayor Cain's telegram of October 27th, Ernest Kanzler, Director General for Operations, War Production Board, made the following statements:

"Mr. Nelson has asked me to reply to your telegram of October 27, 1942. I know that you and your community will appreciate that the action which closed the St. Regis mill at Tacoma was taken only after painstaking deliberation. You are doubtless aware of the circumstances which produced a serious shortage of logs in the Puget Sound area. This shortage required immediate steps to reserve the remaining logs to insure uninterrupted production throughout the winter of

- 1—Highly essential nitrating and dissolving pulp.
- 2—Pulp for export under Lend-Lease.
- 3—Pulp for West Coast paper production.

4—Increased quantities of urgently needed lumber, and rendered a 50 per cent curtailment of over all lumber usage in the affected area imperative. The high operating rate required of mills making nitrating and dissolving pulps necessitated closure of some of the remaining mills and material curtailment of the log usage to others.

...."Decision as to the respective rates of operation of the remaining mills of necessity depended on:

- 1—The essentiality to the war effort of the products of the respective mills.
- 2—The availability of substitute pulp from other less critical areas.
- 3—The necessity of supplying certain quantities of pulp from the Puget Sound area for Lend-Lease requirements and for Pacific Coast paper production.
- 4—The varying effect of over all Puget Sound log imports on the closure or curtailment of the respective plants.
- 5—The degree of labor shortage in the respective localities.
- 6—Conservation of transportation facilities achieved through supplying Pacific Coast paper requirements from Pacific Coast mills rather than from eastern paper mills.

"This problem was presented in detail to the various agencies of WPB charged with materials, facilities and policies involved including the Pulp and Paper Branch, Labor Production Division, Concentration Committee, the Office of Civilian Supply and representatives of the War Manpower Commission and the Army and Navy Munitions Board. All concurred in the decision. Their action was personally reviewed by the Director General for Operations.

"The Possibility of resuming operation in the affected Puget Sound mills depends upon unknown factors which cannot be determined at this time. However, should such resumption of operations prove desirable in the interests of the war effort I feel sure that to accomplish this end the WPB can depend on the help of all concerned. I am confident that with this explanation the people of Tacoma will with you accept the judgment of the War Production Board and abide the decision as a necessity of war."

Ernest Kanzler,

Director General for Operations,
War Production Board.

occupy its single machine 120 hours a week.

A further provision permits the owner of more than one mill to submit plans to combine among all or several of his mills the production allowed separately for each. He may not, however, carry such plan into effect until approval of the director

general for operations is obtained.

WPB officials expect shortly to consult with advisory committees, said the American Paper & Pulp Association, representing various segments of the pulp and paper and other affected industries, concerning the extent and the method of future curtailments.

Curtailment, Concentration And Compensation

NOW THAT the War Production Board has actually shut down three pulp mills on Puget Sound, curtailed operations in other pulp and paper mills in the same area, prohibited all shipments of paper pulps from the Pacific Coast for November and December, taken over control of all pulpwood in the Pacific Northwest and slightly curtailed paper and paperboard production throughout the country, it has started a chain of events which will have far reaching ramifications.

What's coming next? We can't look into the future of the pulp and paper industry with any greater clairvoyance than we can apply to anything else these days. But, from the above WPB actions, from what the WPB men say in their speeches and from what Britain has done, we can roughly determine the trends. In many ways the WPB seems to be following the experience of the British government in controlling production.

The first concentration on a regional basis has been applied to the Puget Sound area, where the shut downs and the curtailments represent the first steps in emphasis upon production of pulp and paper for war uses. It also represents the first example in the American pulp and paper industry of total disruption of producer-customer relationships, through the prohibition of paper pulp shipments Eastward.

An illuminating talk on the subject of concentration was given before the Chicago Association of Commerce, October 21st, by Joseph L. Weiner, deputy director, Office of Civilian Supply, WPB. Mr. Weiner reminded his audience that the WPB had approved the principle of concentration of production on July 23rd. After outlining the need and the principles and describing the concentration effected in the above industry, the first to be experimented upon, Mr. Weiner said this:

"In selecting nucleus plants (a British phrase) we must also prefer the plants whose operations minimize the burdens on transportation and power systems and particularly on those parts of these systems that are already overloaded.

"By way of illustration of the operation of some of these considerations I might cite the pulp and paper industry. In ordinary times the pulp and paper industry ships a great deal of pulp produced in the Pacific Northwest to the East for processing. This long continental haul of pulp and paper over heavily trafficked roads from the Pacific Coast must be reduced as much as possible. In addition, the need for labor in war industries in the Pacific Northwest area is a growing consideration in the selection of nucleus plants. Labor in the woods can provide us with saw logs or pulp logs. For some of its labor the pulp and paper industry competes with shipbuilding and aircraft.

"When there is a conflict between various considerations affecting concentration, we must decide which are the narrowest bottlenecks and relieve them first. After consultation with those competent to advise on all these aspects of the problem, the War Production Board will decide upon the list of plants to be kept in production . . ."

Concentration of Civilian Industries in Britain

● Under this head the November issue of the "Rayon Organon" published by the Textile Economics Bureau, Inc., of New York, made the following comment:

"As it becomes increasingly clear that this country's grand plan of strategy for a civilian war economy may call for a greater concentration of industry, elimination of less essential products, standardization and simplification of products, and a more efficient use of man power, it is timely to examine the British experiences in the concentration of civilian industries.

"Britain adopted concentration plans to organize existing raw material supplies, labor and factory space. To date, British concentration has been limited to civilian goods industries only.

"To get a clear picture of the British concentration of civilian industries, it is necessary to go back to 1939. Soon after the outbreak of war, the curtailment of civilian production became necessary to conserve raw materials, utilize plant facilities and adjust the labor supply. The curtailment of civilian production was performed by the Ministry of Supply through its authority to allocate all raw materials.

"Conditions soon made this single control mechanism obsolete and in 1940 the British Board of Trade was granted limitation of supplies power. This limitation of supplies power, together with the raw material controls of the Ministry of Supply, were applied to achieve the required results. But again the exigencies of total war necessitated further action and in early 1941 the plan for concentration of civilian production in 'nucleus' plants was adopted.

"In carrying out this program of civilian industry concentration, the Board of Trade was authorized to indicate the degree of concentration required in each industry and the methods of concentration. However, groups of individual companies within the industry were encouraged to bring about the desired changes voluntarily. In the event that an industry was unable to act voluntarily, the Government instituted its own plan.

"Five methods of concentration were permitted by the Board of Trade. These were: **Pooling**, whereby all companies in an industry join in a pool to operate a nucleus plant; **transfer of quota**, whereby nucleus plants would pay specific sums to closed companies for the right to use their quota of materials during the war; **levy and compensation**, whereby firms going out of business receive regular payments from nucleus firms; **agency agreement**, under which nucleus plants turn out the same special types of goods made by concerns whose plants were closing down, and sell such goods at cost to these companies who in turn would sell them through their own distribution and sales organizations; and finally **merger**, meaning permanent concentration of ownership and production.

"In the textile industries, there are several business instances in which the merger method was used, the hosiery being a case where it was frequently employed. The cotton spinning and weaving industries impose a levy on active spindles and looms and pay a fixed sum in compensation for inactive weaving sheds and spinning mills. The rayon producing industry has concentrated by simply closing down some plants in munition manufacturing areas.

"In a report to the House of Commons in July, 1942, it was mentioned that almost 250,000 workers and more than 55 million square feet of floor space had been re-

leased through the concentration of civilian industries. Production efficiency also has been increased and raw materials conserved. However, it is currently reported that the problems of labor and raw material supply are still not wholly solved, despite the present degree of concentration. Even further concentration may be necessary.

"Currently supplementing this program of civilian industries concentration is the development of the utility products plan. The purpose of utility products development is to limit the styles of civilian products to a few simplified designs, thereby helping to increase the output of such commodities and to improve their wearability. Utility clothing already amounts to approximately 75 per cent of the total civilian output. It is also interesting to note that the clothing industry now comprises only about 2,000 out of an original 25,000 plants. These 2,000 plants are allowed to continue operations on the basis of 75 per cent production for government and service orders and 25 per cent on utility civilian clothing.

"This British program of industry concentration and utility product development is now being studied by those in our government directly concerned with the task of mapping the strategy for civilian output. Inasmuch as basic differences exist between the industrial organizations of the United States and Great Britain, it is clear that the British plan cannot be super-imposed upon American industry as is. However, the British plan can be invaluable assistance in the development of our own answer to civilian industries concentration."

Compensation

● The WPB recognizes the necessity for compensating those plants it decides to shut down, but has not as yet, to our knowledge, developed any plan for compensating those whose property has been, to all intents and purposes, confiscated. Apparently the WPB would like to avoid this difficult problem, placing the responsibility for solution upon the industries affected. Quoting again from the Chicago speech by Mr. Weiner:

"The concentration of production presents very serious problems as to the fate of the closed plants. The Committee is deeply concerned with this problem, at the same time recognizing that it is a part of a larger problem beyond the scope of the War Production Board. We have not yet found any satisfactory plan, but I will outline the problem as we see it.

"If we close plants, we must decide what steps should be taken to insure that valuable productive resources shall not be allowed to disintegrate. But we cannot merely pension off everyone in a concentrated industry. We all know that there are plants and organizations in most industries which are not valuable enough to be preserved at any great cost. In these days their greatest value may lie in the scrap they can provide. Yet it is extremely difficult to make decisions in particular cases. There are also industries in which we would all agree that facilities should be converted as quickly as possible and play an active part in the war effort.

"But there will remain facilities which, so far as we can see at present, cannot easily be diverted to war production. Yet they may be required later if we need increased output from the industry. The demand for the product of the industry for war purposes may increase, or we may find it necessary to increase our exports or our civilian supplies. Even if no increased demands are likely to appear, we must often preserve equipment to provide replacement parts for equipment in running plants or it may be necessary later to move machinery from closed to running plants.

"In these ways we can keep to a minimum the demand for scarce materials to maintain production in concentrated industries. We may need buildings in which to store supplies, to house training programs, and for a number of other similar purposes. These problems are of course not peculiar to concentrated industries. There is much sentiment in favor of dealing with them in concentrated industries as part of the concentration plan. We are not yet in a position to say whether this is feasible or desirable.

"Related to this question but going beyond it is the question of whether part of the receipts of the running firms should be turned over to the closed firms either for maintenance and upkeep or for other purposes. This problem is very perplexing. Any attempt to share the fortunes and misfortunes of firms within a concentrated industry leaves inequalities between different concentrated industries which, through the forces of circumstances beyond our control are curtailed in different degrees. Any attempt to deal with industries in which production is concentrated while leaving out those in which it is not concentrated gives rise to inevitable inequality between two groups. Financial losses in concentrated industries are intermingled with the broader financial repercussions of war. Wars call for a pattern of economic activity so different from that appropriate to peace that there must be heavy financial loss and profit. These losses and profits are scattered so widely as to make it extremely difficult to devise a plan which distributes fairly not only the direct but the indirect burdens of war.

"The Committee on Concentration of Production is ready to consider such plans as may be advanced by a concentrated industry for compensating closed-down plants out of funds contributed by the nucleus plants. These proposals will be reviewed by a subcommittee including members representing the Treasury and Office of Price Administration. This committee is endeavoring to develop guiding principles in this field."

Profit Pooling Concentration Programs

● Along this line The Journal of Commerce of New York on October 21st made the following comment:

"When the WPB comes around to concentrate industries whose plants cannot be converted to war output, it will provide for compensation of those closing down by their competitors allowed to continue in operation.

"So far the problem has not yet arisen in this country, because concentration has been confined to industries whose closed plants could be readily converted. The pulp and paper industry may be the first example in the more difficult category. Compensation plans require consideration of price, tax and anti-trust problems. Thus, it is readily explained why more rapid progress is not being made.

"Concrete plans for compensation probably will have to be worked out by the industries themselves rather than by WPB. But they will have to be approved of by the Government, probably by a committee including representatives of WPB, OPA, the Treasury and possibly the Department of Justice."

If a profit and loss pooling plan for the pulp and paper industry depends upon its ability to bring the representatives of all these government agencies into a mutual agreement, the industry's executives are going to be large buyers of aspirin.

The WPB's Danger

● Embarking, as it admits, upon a program of concentration without having any plans for compensation,

puts the WPB in dangerous waters. It might through hasty concentration do great damage to the war effort.

The voyage has begun and navigation is the WPB's problem. As navigator for the concentrated industries or those to be concentrated it must chart its course on facts. It must be certain that its "facts" and actually "facts," not impressions of youngsters whose only qualification is a law degree from Harvard. The men it sends into the field to work with the industries must be men experienced in those industries.

Bob Petrie to Supervise Shop Training At Hamilton

● Robert T. Petrie, for the past several years Pacific Coast representative for the Black-Clawson Company of Hamilton, Ohio, and its divisions, Shartle Brothers Machine Co., Middletown, and the Dilt Machine Works at Fulton, N. Y., left Portland November 2nd for Hamilton, Ohio.

Mr. Petrie will supervise the Black-Clawson Company's shop training program at Hamilton for the duration of the war.

"We are operating 100 per cent on war work," said Mr. Herman L. Kutter, president of the Black-Clawson Company, in announcing Mr. Petrie's transfer to PACIFIC PULP & PAPER INDUSTRY. "This required practically duplicating our shop force and in order to do this it was necessary to train a great many new men and still more are needed. Skilled mechanics are simply not available.

"Mr. Petrie is very well posted on general machine shop practice and will therefore be of great assistance to us here, particularly in relieving our general superintendent of some of his duties. We know Mr. Petrie can get cooperation from our men which is a very important factor at this time.

"It is our intention, of course, after the war period to have Mr. Petrie again represent us on the Pacific Coast where we feel he made an excellent showing.

"Our war work," continued Mr. Kutter, "includes a large amount of heavy machine tool production, parts of triple

expansion marine engines and a wide variety of other work for the Navy, Army and other government agencies."

Mr. Petrie served as general chairman of the joint meeting of the Superintendents and of TAPPI, held in Portland last June. His family will remain in Portland.

Hayward Nominated for Second Term as President of TAPPI

● Ralph A. Hayward, president of the Kalamazoo Vegetable Parchment Company, has been nominated for a second term as president of TAPPI by the nominating committee of which Frederick Wierk of New York, was chairman.

Vance P. Edwardes of the International Paper Co., Palmer, N. Y., was also nominated for a second term as vice president.

For executive committeemen: A. E. Bachmann, Missisquoi Corp., Sheldon Springs, Vermont; Paul Hodges, Crossett Paper Mills, Crossett, Ark.; J. D. Malcolmsen, Robert Gair Company, New York City; and, A. E. Montgomery, J. O. Ross Engineering Co., Chicago, for three year terms.

In accordance with the Association's constitution, Article VII, Section 3, "Other nominations, if signed by at least 25 voting members may be submitted to the secretary in writing on or before December 20th; and if each nomination so made is accepted in writing by the nominee, the name shall appear on the official ballot."

Hawley Employees In Service Receive Cigarettes

● The employees of the Hawley Pulp and Paper Co. at Oregon City remembered the 146 men who have left the mill and joined the armed services by sending each a carton of cigarettes for Christmas.

Packed in each carton was a Christmas card carrying the mill's honor roll of men in the Army, Navy, Coast Guard and Marines; a photograph of the ceremony at which the mill received its Minute Man and Bulls Eye Flags for signing up more than 13 per cent of the payroll for War Bond purchases; and, a return postcard for verifying the recipient's present address for remarks and for a promise to notify the boys at home of any change of address.

The following men from the Hawley organization are now in the Army: Floyd L. Aldrich, Arthur Soesbe, Arthur E. Benke, Daniel J. Benski, C. A. Benski, Cecil Triplett, L. F. Sajovic, Edward E. Granquist, Walter M. Zeller, Ervin Dunn, John Holden, Robert E. Dunn, William G. Lambert, Joe Tercek, C. A. Rindfleisch, Carl W. Becker, Horace E. Krue-

If the WPB's men do not possess this experience they are apt to be misled. They will be unable to distinguish a fact from an argument, and this would give rise to decisions which would likely be criticized as having been based upon politics.

Industry desires the WPB's success in its efforts to prosecute the war efficiently and it will make whatever sacrifices are necessary. But, it wants to be sure the acts of the WPB are based upon facts, intelligently interpreted.

ger, Albert Guenther, Leonard Chapin, Joe Lemsher, Jr., Edward L. Zak, Eldon L. Smith, Melvin Meilike, A. M. Smith, Keith Shepherd, Arthur Klinger, Layton Traylor, Marion F. Hays, John A. Kosciolk, J. S. Shinkle, James E. Morris, Don E. Sullivan, Roscoe H. Klemesen, A. J. Miller, Wm. R. Chapman, Eldon G. Harvey, Dale Tholen, John Feldman, Francis B. Kroll, Merlyn D. Soesbe, Carol C. Jewell, August J. Turnshek, Fredrick Weyer, R. Rindfleisch, Harold C. Stroup, Vernon L. Tipka, Robert B. Fosberg, Hurley Hammond, Raymond Meador, D. Mulligan, L. R. Allen, John Bettineski, Kay Baker, W. Corrington, Albert Moris, W. E. Heider, W. E. Dungey, D. Zimmerman, S. C. Cleveland, C. E. Routh, G. Fuson, A. J. Barlett, F. Huddleston, F. H. Dragoo, Joseph Rice, Lewis Joy Davis, H. Manning, H. F. Richardson, Dewey Miller, Arnold Welk, Lee Rider, E. L. Dungey, H. O'Neal, L. Marks, Ray Hahner, E. K. Smith, John Luzar, W. A. Sjoberg, Leroy Smith, K. Manning, Jack Schmidt, D. H. Strauffer, L. Reynolds, F. Schlicht, Arnold Warmuth, Ray Fisher, Leo Lei, H. C. Sumner, C. L. Rowlett, Lee A. Young, Emery Hopkins, Robert Field, Steven Jarvas, D. Retherford, Claude Green, T. Trygg, Richard J. Zak, I. Cruikshank, Lloyd Couch, J. Zillig, Luke Hampton and Theo. Granquist.

These men are in the Navy: Orin C. Richert, M. Richert, Emil E. Benoit, Donald L. Hoyt, Dale Felton Plummer, L. E. Carpenter, Chas. G. Meilike, C. J. Demacon, G. W. Russell, George Eberly, R. R. Sumner, Wilhelm Peterson, Lee Parker, V. W. Tidd, Donald Hickey, Mark Hays, W. C. Brog, Ed Thomman, Robert Blatch, Geo. Weldon, Erwin Tinnum, E. L. Johnson, John Allen, Earl Frost, Gordon Gilfillan, Chester Nieland, Warren Beard, E. C. Michels, L. E. French, Carl Schaffer and Lyle McCurdy.

The following are serving in the Coast Guard: Willard Benson, M. A. Saarsfield, Vincent Trygg, Kenneth Jennings, Harold C. Riebhoff, A. V. Grand and Melvin Campbell.

And six are in the Marines: Ralph G. Ford, Otto Blischke, Gerald E. Curran, James Alexander, Robert Haskins and Leon Wickman.

Cavin and Brinkley Get Bird Limit

● Harold D. Cavin, resident engineer for the Puget Sound Pulp & Timber Company, Bellingham, and James Brinkley, coordinator of machine shop war work for the Pacific Coast Association of Pulp and Paper Manufacturers, went on their annual bird hunting trip early in November.

They reported the hunting on the eastern side of the Cascades as excellent, each bringing back the limit.



ROBERT T. PETRIE,
War work in Hamilton

Trade Talk



of Those Who Sell Paper in the Western States

Zellerbach Honor Roll Growing Rapidly

● The call for service in the armed forces continues to lengthen the list of names on the Honor Roll of the Zellerbach Paper Company, San Francisco. A new Honor Roll, framed and occupying places of prominence throughout the building, contains 155 names, as against 112 named on a list issued only a few weeks ago.

Frank Carson Named BM&T Seattle Sales Manager

● The appointment of Frank A. Carson to the position of sales manager of Blake, Moffitt & Towne's Seattle Division was recently announced by Mr. O. W. Mielke, general manager. Mr. Carson came to the Blake, Moffitt & Towne organization in January, 1920, following his release from the Army. He is well qualified for his new duties, having had a wide experience in all branches of the paper business, including warehouse, office and selling. For the past several years he has supervised purchasing activities and acted as assistant to the sales manager.

While in charge of the purchasing department, Carson made many personal friends among mill representatives. It was also during this time that he took an active interest in the Purchasing Agents Association of Washington. His leadership and executive ability were recognized in his selection for a number of offices in the organization, finally leading to his election as president. When his new duties necessitated his resigning from the association it was in appreciation of his valued service that he was elected to honorary membership. His civic interests at this time include membership in the Seattle Chamber of Commerce and in the Seattle War Chest.

Mr. Carson succeeds Leo Chapman, former sales manager, who recently resigned to enter business for himself.



FRANK CARSON,
Sales Manager,
Blake, Moffitt
& Towne, Seattle Division.

Moffitt Elected Head Of California Regents

● Credited with one of the longest terms on record as a Regent of the University of California, added honors have been bestowed upon James K. Moffitt, San Francisco civic leader and president of Blake, Moffitt & Towne, with his election as president of the Board of Regents. Announcement was made by Robert G. Sproul, president of the University.

A member of the board for more than 30 years, Mr. Moffitt has maintained close relationship with the University, and has seen it develop into one of the largest institutions of higher education in the country. Since being graduated in 1886, he has devoted much time and energy to his Alma Mater, one of his chief interests being the University Library. At annual Charter Day exercises last year he was the recipient of the honorary degree of Doctor of Law.

Mr. Moffitt is president of the San Francisco Community Chest, which he helped found 20 years ago, and with the formation of the War Chest this year, was selected as a member of the board of directors.

Son of one of the founders of Blake, Moffitt & Towne, now in its 87th year of serving the Pacific Coast trade, Mr. Moffitt's organization now maintains 16 divisions and branches. He also serves as Chairman of the Board of Crocker First National Bank of San Francisco.

BM&T Holds Sales Meeting

● Selling paper products under today's wartime conditions were among problems discussed at the annual meeting of sales managers of Blake, Moffitt & Towne at San Francisco headquarters division, Oct. 19-20.

On the final day the sales executives were joined by Northern California branch managers from Oakland, Sacramento, Fresno, San Jose and Stockton.

O. W. Mielke, general manager, presided over the two-day session, and discussions led to the development of a comprehensive plan designed to maintain customer good will.

Problems involving frequency of salesmen's calls and restrictions resulting from tire and gasoline rationing were considered from the standpoint of various coastwise territories, to extend maximum service at minimum expenditure of rationed commodities.

Among those in attendance, in addition to manager Mielke, were: J. K. Moffitt, A. W. Towne, H. P. Westler, L. C. Conner, and J. A. Gruner, of San Francisco; R. L. Simpson and R. R. Whiteman, Los Angeles; P. C. Macdonald and R. G. Nielson, Portland; F. A. Carson, Seattle; L. V. Hall, Tacoma, and L. C. Calkins, Phoenix.

Ticoulat to Play Santa Claus At C-Z Christmas Party

● Without bright red jacket and flowing white beard, G. J. Ticoulat, sales manager of Crown Zellerbach Corporation, San Francisco, would be uncomfortable on Christmas Eve. For almost a fifth of a century he has played the role of Santa Claus for fellow employees, and 1942 will be no exception.

The annual Christmas party, sponsored by the C. Z. Club with all employees as guests, will take new form this year, due to gasoline and tire rationing, dimout regulations, and multifarious war activities in which all participants are engaged.

Instead of the usual Christmas dinner dansant staged at a downtown hotel, the party will be held on the 13th (roof garden) floor of the Crown Zellerbach building, beginning at 12:30 o'clock on the afternoon of December 24th, with a turkey luncheon, followed by dancing and award of gifts by "Santa Claus" Ticoulat.

The Christmas party will continue throughout the afternoon, with a diversified program arranged by C. V. Lynch, chairman of the entertainment committee, and Roberta Monson, director of personnel and secretary of the club, as the charming hostess. Al Stanton is president of the club and co-instigator of the forthcoming Yuletide afternoon of fiesta, fun and frolic.

Brinker to Represent Rex Paper Company

● N. L. Brinker has been appointed Pacific Coast sales representative of the Rex Paper Company, of Kalamazoo, Mich., with headquarters in Los Angeles. He was for many years connected with the Zellerbach Paper Company.

Walthers Returns To San Francisco

● Ed H. Walthers, until recently manager of the Chicago division, Zellerbach Paper Company, has joined the company's sales promotion staff in San Francisco. In working out wartime promotional problems he will be associated with King Wilkin, assistant to the president. George A. Mueller, former manager, again is in charge of the Chicago division.

Nail and Olson Leave Oregon Pulp & Paper

● J. E. Nail has resigned as sales manager of the Oregon Pulp & Paper Company, Russ Bldg., San Francisco, effective Nov. 1. Also resigned is Ralph Olson, former assistant to Mr. Nail, to join the armed forces. He has been succeeded by George Miller, well known in the industry in the Northwest.

Carpenter Visits San Francisco Office

● I. W. Carpenter, Jr., president of the Carpenter Paper Company, Omaha, Neb., spent several days in November with C. H. Beckwith, manager of the San Francisco division. Arriving from Los Angeles on a tour of his company's branches, Mr. Carpenter reported that operations have been adjusted to wartime conditions, and that the entire organization is giving 100% cooperation with the war effort. The Carpenter Paper Company was one of the active participants in the "Koa-to-Koa Key Kollection Campaign," sponsored by the paper industry.

William Zellerbach An Ensign In the Navy

● From college into the service of his country was a single step for William Zellerbach, son of H. L. Zellerbach, president of the Zellerbach Paper Company. Enlisting while still a student, the young man was permitted to complete his studies and be graduated by University of Pennsylvania, before assuming his first assignment in the Navy. Now the name is Ensign William Zellerbach, U. S. N., and he's stationed somewhere in the East.

OPA Is Thorough

● Apparently the Office of Price Administration is determined not to overlook any items in its price control. On November 3rd an amendment was issued (No. 5) to maximum price regulation 210, covering a multitude of Fall and Winter seasonal commodities. A new pricing formula is to be applied to numerous items.

Among those made of paper that the OPA is changing the pricing formula for, are: diaries, appointment books and

date books; social and commercial calendars; and for Christmas and New Year's use, decorated tags, seals and enclosures, decorative paper ribbons and tapes, gift wrapping papers, non-personalized greeting cards and gift money holders.

Knobe Visits Coast Jobbers

● Samuel C. Knobe, vice-president of Albermarle Paper Manufacturing Company, Richmond, Va., recently was a San Francisco visitor on a tour of the West Coast. Well known and popular in the industry, Mr. Knobe renewed many friendships in the city by the Golden Gate.

Problems In Merchandising Discussed By Mrs. Palm

● Problems pertinent to merchandising pursuits in perilous times were discussed by Glory Palm, advertising manager of the Zellerbach Paper Company, San Francisco, guest speaker at the Nov. 10 meeting of the Sacramento Ad Club. "Keep it Courteous" was the title under which the able ad executive stressed the importance of diplomacy in explaining to customers, when emergency restrictions necessitate curtailing certain services to which they have become accustomed.

Zellerbach Publication Promotes Nutrition

● A balanced diet means huskier, healthier workmen, and women, less fatigue and greater efficiency in performing arduous duties multiplied by the present emergency.

Knowing what to eat and when . . . with meatless Tuesdays, vitamin Thurs-

day, and rationing running throughout the week . . . Zellerbach Paper Company, San Francisco, considers the matter of personal maintenance sufficiently important to warrant official recognition.

Offering free of charge to all families of employees a complete ten-lesson course in nutrition, is but part of the program. Two pages of the current issue of The Informant, house organ, attractively are devoted to "Neat Tricks of the Month," on how to make the most with the least in the preparation of healthful, energy-restoring menus under the will-to-win program of conservation.

Certificates of award are to be issued to all who complete the course, designed "to make better, stronger Americans at a time when better, stronger Americans are the first need of the Nation."

Gene Arth Gets First Jap Plane

● Anyone who ever went into the Los Angeles office of the Everett Pulp & Paper Company had the pleasure of meeting, and such it was, Gene Arth, assistant to Ansel A. Ernst for the past two or three years. Gene is characteristic of American boys, one of the friendliest, finest young men you would ever meet. Gene went to Hollywood High School and from there to work. When the Japs attacked Pearl Harbor Gene couldn't wait to get into the service. He earned his wings and more, for early in October flying with his squadron in one of the Army's fast P-39 interceptors, Gene was first to get his Jap Zero plane. He promised to get at least one and he got him. The kill was twenty-two Zeros in this bout, but Gene was first to drop one. He's still at it, and there isn't a papermill man in southern California who isn't proud of this young man and wishing him all the luck in the world.

Faster Stock Handling With a Reduced Staff

SSTREAMLINED for wartime, the newly modernized and enlarged Oakland, Calif., division of Blake, Moffitt & Towne is a model of systematic planning and arrangement for the efficient and economical handling of paper products.

Major new construction in this extensive improvement program is addition of a one-story receiving and shipping department to the original two-story warehouse and office structure, increasing the floor space approximately 25 per cent.

The addition gives frontage on three streets, extending from Fifth to Sixth on Webster street, and permits under-roof loading of three trucks simultaneously.

The main office was completely remodeled, with plate glass partitions separating various departments. Light green Venetian blinds har-

Modernized Oakland Division warehouse and offices of Blake, Moffitt & Towne speeds deliveries to customers despite manpower shortage.

monize with the redecorated interior and contrast with the ivory ceiling and maroon asbestos tile floor.

Facing Fifth street, the private office of J. Lloyd O'Connell, manager, is immediately to the right of the entrance into the counter sales and order office. A private room is provided for the division's nine salesmen, each with individual desk and telephones.

Immediately adjoining is the bookkeeping department, where order tags are approved for credit, and with less than a dozen steps, carried by salesmen to the Kardex perpetual inventory file, there placed in a tube and conveyed by air to the shipping department at the opposite end of the building.

Time consumed in the actual writing of an order until it is in the hands of the shipping clerk is a matter of a few minutes.

The newly installed tube conveyor system, assuring immediate delivery of orders to the shipping desk, replaces the former pick-up plan at a considerable saving in time and manpower. Another new installation to facilitate filling and handling of orders is a vocal call system reaching all parts of the warehouse and offices.

All products in the warehouse are placed on individual skids, picked up in a single operation by a dolly and instantly moved to the loading platform, without further handling.

Heavy products most often moved are stored nearest the shipping department, while on the second floor, reached by a central elevator, are bins of envelopes, tags, bonds and lighter commodities.

All warehouse windows have been frosted with a specially prepared anti-glare paint to eliminate damaging light rays, yet the entire structure is so well naturally lighted as to reduce to a minimum the use of electricity.

The wrapping paper department has been placed at the southern end of the new building, immediately adjoining the shipping department, so arranged that skid loads of paper must of necessity pass over the floor-



Enlarged and modernized warehouse and offices arranged for minimum handling of orders and of stock, of the Oakland Division, Blake, Moffitt & Towne. At the left, the new one-story receiving and shipping department.



J. LLOYD O'CONNELL, Manager
Oakland Division, Blake,
Moffitt & Towne

level scales to reach the loading platform.

Heavy duty no-spring Toledo scales have been installed, with capacity of 2250 pounds. The skids have been weighed and scales are set so as to make proper reduction in automatically arriving at the net weight.

This one improvement, Manager O'Connell pointed out, is responsible for a saving of many hours and much manpower daily over the former less convenient plan of handling this and similar bulky products.

Having had much to do with the original planning and arrangement to increase efficiency and reduce manual labor to a minimum, manager O'Connell is justly proud of the achievement and the speed with which increasing orders now are handled by a staff considerably reduced in number by demands of the armed forces.

Citrus Fruits to Be Packed In Fibre

● Christmas oranges this year are reaching retailers in containers differing decidedly from the familiar two-compartment wood boxes used by the citrus industry for more than half a century. The new packing plan is in compliance with instructions from the War Production Board.

Central California producers, concerning the counties of Tulare, Kern and Fresno, made many experiments, decided upon fibreboard boxes as a most practical substitute. Hence, practically the entire citrus fruit crop in these three counties, estimated this year at 10,000 carloads, will be encased for shipment in paper-board containers.

In addition to a shortage of manpower in the lumber industry, WPB pointed out that the old method of packing in divided wooden boxes involves, aside from lumber urgently needed for other war purposes, many tons of wire, staples and nails required to hold the wooden boxes together.

It was said that some 35,000 tons of wire and nails were used annually in the United States making and lidding wood fruit and vegetable containers.



BLAKE, MOFFITT & TOWNE'S new office and warehouse arrangement saves time and manpower. At the left, TOM PARKINSON, Warehouse Foreman, explains to HERB CHISHOLM, Advertising Manager of BM&T, the operation of the new tube conveyor system which delivers orders from office to the shipping desk at the opposite end of the block-long building, only minutes from the time they were written by the salesmen.

Center, a typical storage row with all stock on skids to provide faster handling with a reduced staff. Moved by dolly to shipping department in a single operation.

Right, loading platform at truck bed height permits loading skids directly on truck and eliminates handling of individual pieces.

Public Health and Paper

by J. C. GEIGER, M. D.*

IT is not uncommon for most people, especially those who use the budget system, to take time out at the end of the day carefully to remove paper money from their pockets and roughly estimate the daily expenditures. Seldom, however, do they stop to consider the many articles handled throughout the day which are an important part of their ordinary routine.

Consequently, they never are fully aware of the adjustments of daily habits which would have to be made if a portion or all of any of the daily necessities were to be restricted, or in some instances completely prohibited.

The present war has changed this attitude to some extent and people now are a little more alert to the possibilities of being forced to deny themselves certain heretofore readily obtainable commodities.

Among the many important items in constant daily use in large quantities is paper of all sorts and description. Most people accept the fact that it is available, but are not conscious of the many ways in which it affects them, the extent to which it contributes to the comfort, convenience and health of their daily lives.

Many persons start the day reading the morning newspaper and end the day by endeavoring gently to deliver themselves into the forgetful-

ness of sound sleep by scanning the news of the evening paper, or enjoying a good story or article in a favorite magazine.

Imagine a present-day individual comfortably ensconced in bed under the pleasant glow of a proper reading light trying to juggle into a comfortable position an inscribed tablet of the poets of the Stone Age. Yet people through thoughtlessness do deprive themselves of readily available cheap items such as paper.

Soon after the declaration of war, American industry entered into an era of vast production of war materials in unprecedented quantities. After a few months of this rapid pace it became obvious that curtailment of production of certain materials for civilian use soon would be in order.

Unfortunately, many conflicting stories of shortages of raw materials began to appear in the daily press, among which were articles relating to conservation of paper. Stories circulated in many sections of the country encouraged the return of cardboard boxes, paper bags, and other wrappings. A number of retail merchants asked customers to do this very thing. Analysis of the facts later proved there was plenty of paper for all essential needs.

While it is true that the practice of using secondhand paper or cardboard may prove of little significance from the standpoint of public health and the communicability of disease, it certainly is most undesirable from an aesthetic viewpoint. ● At no time, however, should old or possibly freshly contaminated paper be used in such a manner that it is in direct contact with perishable foods such as meat, poultry, fish, butter, cheese and even vegetables, many of which may directly act as a suitable culture medium for accompanying bacteria.

In the case of vegetables, the untidy wrapping does not add to the palatability of the product and it is entirely possible for a merchant to lose the patronage of desirable customers through such practice. Therefore, until the time arrives when competent authorities indicate the need for curtailment of the use of new paper and paper products, the rumors of shortage should be actively combatted for their continuation may easily impede the desirable progressive development of paper products.

Paper Eliminates Health Menaces

● During the past decade the paper industry has developed many practical products which have almost completely replaced heretofore accepted articles which always were potential public health menaces requiring various degrees of supervision by health authorities.

Paper towels have practically ended the health official's hard fought battle for the abolition of the common roller towel. Paper drinking receptacles, plates, etc., have provided a means of curtailing careless dishwashing and have added materially to the pleasures of the family weekend picnic, house party, after-meeting refreshments, and other servings of food. Paper napkins, kitchen towels and even baby's diapers have eased the burden of the housewife. Paper containers for various fluids, such as milk, have helped to eliminate the practice of refilling which in many cases formerly was very objectionable to the health officer because of lack of proper sterilization.

During 1939 and 1940 the Golden Gate International Exposition was held in San Francisco. Public health activities were handled by a small squad of picked men from the San Francisco Health Department, under the supervision of the Director of Public Health.

Total attendance during the operation of the Exposition was approximately 35,500,000 meals served by 60 restaurants. Also, there were 164 food stands throughout the grounds from which all sorts of special types of foods were sold. Among this group were the "hot dog" and hamburger stands which dispensed approximately 6,000,000 "hot dog" and 1,000,000 hamburger sandwiches. All of these stands used paper utensils exclusively.

During the entire operation period the San Francisco Health Department enjoyed the enviable record of having only 24 cases of alleged food poisoning reported, only six of which were confirmed, and the food involved was a certain type of sandwich prepared outside the Exposition grounds.

The successful health record was due to rigid inspection measures and somewhat to the fact that hand dishwashing was not permitted. Automatic dishwashing machines were a



DR. J. C. GEIGER,
Don't use old paper
for wrapping foods

*Director of Public Health City and County of San Francisco.

mandatory requirement. If the latter were not possible, then paper utensils were absolutely required.

Today's Danger

● Under present war conditions and its accelerated industrial production necessities, activities in certain areas have increased correspondingly. The subsequent influx of large numbers of persons for whom there were scarcely enough accommodations has added to the problem. Many of these communities still are staggering from the sudden shock and are desperately trying to provide adequate housing, food establishments and other necessities.

Such situations demand increased alertness on the part of the public health official, particularly with respect to eating and drinking estab-

lishments and the sanitary facilities afforded workers in their industrial environments.

All branches of the food catering industry are facing a serious problem which is becoming more noticeable each day. For instance, the lack of competent help, the diminution of quality foodstuffs and the increased demands on facilities are quite evident in many branches of the food industry and in many localities. Any one or all of these can readily cause a sharp rise in illness from food that is unfit or improperly prepared or served. It is, therefore, obligatory for the owners, managers and health officers to see that all health standards are maintained.

● Consequently, sanitary paper products can play an important role in this war effort by providing

health protection for the civilian population.

Continued development of paper goods, such as cups and other eating utensils, undoubtedly will contribute largely to abolition of many undesirable present-day practices which health authorities are trying to eliminate.

● Under no circumstances should this development be deterred by unnecessary demands for conservation through the medium of using improperly stored or handled, or possibly grossly contaminated second-hand paper where clean new paper formerly was and still can be used.

Finally, the sanitary paper container used in public health procedures can prove a valuable adjunct to the modern health department.

Absenteeism Serious Problem in British Columbia

● Absenteeism and "camp hopping" are still regarded among the major hindrances to production at British Columbia's pulpwood and other logging camps as well as in shipyards and war industries.

Efforts to correct the situation are being made by the Canadian national selective service organization.

Absenteeism—the practice of workers to remain away from their jobs without good cause—has been particularly noticeable in British Columbia since the higher income taxation went into effect.

Loggers and some other workers have figured it out that if they work just so much they will not be liable to income taxes; that if they work beyond that point most of their earnings will go to the government. Income tax experts point out that this theory is fallacious and that workers are "cutting off their nose to spite their face," but they admit that the practice still prevails.

Whether the Canadian government will take drastic steps to curb the practice is yet to be determined. In Great Britain if a worker is found guilty of missing a single shift without cause he is subject to a fine or a maximum of twenty days in jail.

A few months ago loggers reported loss of production through their men drifting from one camp to another or spending long week-ends in the cities with a view to escaping income tax payments. But now that loggers have been granted deferments from military service because the government regards the industry as "essential" a closer check is being made on them.

It was estimated a few months ago that fallers and buckers often worked only about 60 per cent of their time, but under the new set-up the logger can't quit without adequate notice and then if medically fit—and most loggers are—he cannot get another job except in the army if he leaves camp.

In the spruce camps of Queen Charlotte Islands loggers are paid bonus wages, but only on condition that they

work at least 100 days at the logging camps.

Absenteeism was at a minimum in British Columbia war industries during the blackout period following the attack on Pearl Harbor.

"If danger was tangible in this part of the world they'd all be close to the job," declares Gerald Haller, chairman of the British Columbia War Industries Personnel Managers Group, which is doing its best to encourage all-out production.

Over 600 Powell River Men in Armed Services

● The September issue of Powell River Digester, house organ of Powell River Company, newsprint and pulp producer in British Columbia, is devoted to a review of the company's contributions of manpower to the armed services.

Powell River Company probably has set a record for the industry with more than 600 men in the army, navy and air forces of the United Nations.

The Digester contains the names of all the men enrolled, gives a description of the exploits of some of the more distinguished members of the company.

British Timber Controller Visits British Columbia

● Major A. I. Harris, Britain's timber controller, visited British Columbia early in November to see how the aircraft spruce and hemlock production program was being worked out in correlation with the requirements of the pulp and paper industry.

Powell River Company and other pulp and paper organizations in British Columbia have been conserving their clear spruce timber for more than a decade for aircraft production and much of the balance has been manufactured into box material for ammunition, butter tubs and other goods.

Pulp and paper men, loggers and sawmill operators conferred with Major Harris during his visit to the coast.

Vancouver Man Named Canadian Timber Controller

● Alan H. Williamson of Vancouver, B. C., has been appointed timber controller for Canada, with A. S. Nicholson continuing as associate controller.

The reorganization was announced by Hon. Clarence D. Howe, Canadian minister of munitions and supply, who expressed dissatisfaction with the production of lumber in Canada.

Williamson is a newcomer to the forest industries and in private life he is in the investment business as partner of the Canadian house of Wood, Gundy & Company. But he is known as a result-getter and is highly regarded in the War-time Prices and Trade Board, which he has served as controller of supplies for more than a year.

Mr. Nicholson, who takes a subordinate role in the new setup, is an eastern wholesaler. He was the third timber controller, his predecessors being H. R. MacMillan of Vancouver and Loren Brown, also a former Vancouver man.

Canada No Longer Importing Waste Paper

● Salvage collection operations have shown that Canada, formerly an importer of waste paper, now is self-supporting in this field, according to C. U. Hodder, administrator of boxes, packages and waste paper for the War-time Prices and Trade Board.

Although collection of waste paper by voluntary salvage committees has been abandoned except where a ready market exists, the need for waste paper collection of this type may return, Mr. Hodder says. Substitutes for packages made of tin and other materials required for war purposes are being sought, and in these substitutes waste paper will be used to a greater extent.

R. W. Mayhew, managing director of Sidney Roofing & Paper Company, Victoria, claims there are many luxury packages now on the Canadian market that will have to go.

"It might have been better," he said, "instead of discontinuing the collection of waste paper, to stop the uses of good paper for non-essential purposes."

an **IMPORTANT FACT**

**you should know about
BLACK-CLAWSON-SHARTLE-DILTS**

Many people in the paper industry do not realize how many other industries are occasionally served by Black-Clawson-Shartle-Dilts. We call this to your attention at this time because our experience in designing and building special machinery in other fields may be of important service to you.

B. C. S. D. have built special asbestos pipe machinery, laundry dryers, soap chip machines, ink mills, Vinyon dryers, special jordans, pumps and valves for ordnance service, etc. At the present time, we are manufacturing among other things, machinery of a special nature for the manufacture of plastics and synthetic rubber products.

Yes, B. C. S. D. have the facilities, the personnel, and the flexibility to handle problems that are unusual, puzzling, and urgently in need of solution.

**BLACK-CLAWSON, Hamilton, Ohio. Shartle Div.,
Middletown, Ohio. Dilts Div., Fulton, New York**

SHARTLE-DILTS

Pacific Coast Representative,
MR. ROBERT PETRIE
3208 42nd Ave. N. E.,
Portland, Oregon

FRA
Are

TAPPI Meets at Camas

● The Pacific Section of TAPPI held its second dinner meeting of the 1942-1943 schedule at the Crown Willamette Inn, Camas, Washington, on the evening of November 3rd.

Sixty-six men attended. On the return postcards that had been sent to all on the mailing list a request had been made, "Due to conditions resulting from the war, it is important that the committee has accurate information on the number who will attend the dinner meetings this year. Your cooperation will be appreciated."

Only 40 cards were returned to Herbert Wymore of Crown who had charge of arrangements. On the basis of past experience Mr. Wymore and Robert True, secretary-treasurer of the Pacific Section, figured that the attendance ought to be around 60, so they ordered that many dinners. Unless those who intend to be present at the TAPPI dinner meetings all send in their cards, some of them are going to go hungry at some future meeting.

Chairman of the Pacific Section, Edward P. Wood, presided. Seated with him at the head table were: A. S. Quinn, Secretary-treasurer of the Pacific Coast Division of the American Pulp & Paper Mill Superintendents; George H. McGregor, first vice chairman of the Superintendents; Merrill E. Norwood, chairman of the Superintendents; R. W. Griffin, manager of the Portland branch of the B. F. Goodrich Company; Clarence Enghouse, vice

Hears papers on "Industrial Welding in the Paper Industry as Applied to Beater Lifting Tackle," and "Micarta—a Substitute for Critical Materials" . . . Sees sound moving picture, "Keep 'Em Rolling" . . . Next meeting scheduled for Longview, January 5, 1943.

chairman of the Pacific Section; Richard Buckley, chief chemist, Fernstrom Paper Mills, Inc., Pomona, Calif.; Frank K. Zaniker, welding supervisor of Crown Willamette Paper Co., Division of Crown Zellerbach Corp., West Linn; W. Norman Kelly, manager, Longview Mill, Pulp Division Weyerhaeuser Timber Co.; A. G. Natwick, assistant resident manager, Crown Willamette Paper Co., Division of Crown Zellerbach Corporation, Camas; and Robert M. True, secretary-treasurer, Pacific Section of TAPPI.

Mr. Zaniker presented his paper, "Industrial Welding in the Paper Industry as Applied to Beater Lifting Tackle," which was a prize winner in the recent James F. Lincoln Arc Welding Foundation contest. Mr. Zaniker's paper is published in this issue.

The second paper was given by Mr. A. B. Thomander, Micarta specialist, Pacific Coast District, Westinghouse Electric & Mfg. Co., San Francisco. His paper will be published in the December issue. Mr. Thomander exhibited a variety of products made from Micarta, a phenol-formaldehyde base plastic, and described the several purposes in the pulp and paper industry for which it has been used so far. He pointed out that it was an excellent substitute material and was available at present on an A-10 priority which all of the mills have. The ingenuity of the men in the industry would, he said, undoubtedly develop new applications for Micarta as parts made of critical metals wear out.

Preceding the showing of the B. F. Goodrich Company's sound moving picture, "Keep 'Em Rolling," Mr. R. W. Griffin, manager of the Portland branch, outlined the rubber problem, the plans for synthetic production and stressed the necessity for each of us to adopt the viewpoint that the rubber we can save personally by careful driving will directly help win the war. The picture portrayed the importance of rubber in the nation's transportation system and in the prosecution of a successful war, and emphasized the point that the shortage was serious.

A vote of thanks was given to Herbert Wymore for making arrangements for the dinner. The next scheduled meeting will be held on January 5th at the Hotel Montecello, Longview. The program will be announced by vice chairman Enghouse in December.

The following men attended the dinner meeting sponsored by the Pacific Section of TAPPI at Camas, November 3rd:

E. R. Barrett, A. O. Smith Corp., Seattle; Chester T. Beals, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; Geo. H. Beisse, Pulp Division Weyerhaeuser Timber Co., Longview; W. S. Boutwell, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., West Linn; Richard S. Buckley, Fernstrom Paper Mills, Pomona, Calif.; Robley Butler, Crown Willamette Paper Co., Division of Crown Zellerbach Corp.; Camas; Arthur J. Chaput, Bureau of Reclamation, Portland; W. E. Damon, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; T. E. Dear, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas.

Harold A. Deery, Pulp Division Weyerhaeuser Timber Co., Longview; O. T. Defieux, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; V. S. Denison, Beloit Iron Works, Beloit, Wis.; C. A. Enghouse, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., West Linn; A. E. Erickson, Pulp Division Weyerhaeuser Timber Co., Longview; M. M.



FRANK K. ZANIKER,
Arc Welding Solves Problems



A. B. THOMANDER,
Micarta—A Substitute on an A-10

Ewell, Westinghouse Electric & Mfg. Co., Portland; B. W. Farnes, R. E. Chase & Co., Portland; L. E. Fear, Westinghouse Electric & Mfg. Co., Portland; Francis W. Flynn, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas.

G. H. Gallaway, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; T. H. Grant, Columbia River Paper Mills, Vancouver; Robert W. Griffin, B. F. Goodrich Co., Portland; J. A. Harris, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., West Linn; E. J. Hinde, Pulp Division Weyerhaeuser Timber Co., Longview; W. F. Holzer, Central Technical Dept., Crown Zellerbach Corp., Camas; Otto L. Hudrlik, The Flox Company, Portland; Henry Jacobsen, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas.

W. N. Kelly, Pulp Division Weyerhaeuser Timber Co., Longview; C. Kiphart, Cellulose Products Laboratory, Tacoma; Myron A. Knudson, Westinghouse Electric & Mfg. Co., Portland; Harold Lange, Cellulose Products Laboratory, Tacoma; C. J. McAllister, Simonds Worden White Co., Portland; Margaret McConahay, Cellulose Prod-

ucts Laboratory, Tacoma; G. H. McGregor, Pulp Division Weyerhaeuser Timber Co., Longview; F. D. McGillicuddy, Jr., Grays Harbor Division, Rayonier Inc., Hoquiam; Robert W. Martig, Brown Instrument Co., Portland.

Beverly Matthews, Central Technical Dept., Crown Zellerbach Corp., Camas; O. P. Morgan, Pulp Division Weyerhaeuser Timber Co., Longview; Otto Michaelis, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; H. Norman Miller, Westinghouse Electric & Mfg. Co., Portland; A. G. Natwick, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; M. E. Norwood, Columbia River Paper Mills, Vancouver; Edward H. Nunn, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., West Linn; Louis Ostenson, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; J. C. Plankinton, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; W. P. Porter, Willamette Iron & Steel, Portland; Albert S. Quinn, Stebbins Engineering Corp., Seattle.

A. P. Ratcliff, Jr., Pulp Division Weyerhaeuser Timber Co., Everett; E. D. Rich, Cellulose Products Laboratory, Tacoma; H. H. Richmond, Electric Steel

Foundry, Portland; Harlan Scott, Pacific Pulp & Paper Industry, Seattle; D. L. Shirley, Link-Belt Company, Portland; C. Sholdebrand, Hawley Pulp & Paper Co., Oregon City; Ray Smythe, Rice Barton Corp., Portland; Bert E. Sullivan, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; A. B. Thomander, Westinghouse Electric & Mfg. Co., San Francisco.

W. E. Thorp, Cellulose Products Laboratory, Tacoma; R. M. True, General Dyestuff Corporation, Portland; Leona Van Arnem, Central Technical Dept., Crown Zellerbach Corp., Camas; H. J. Wagner, Pulp Division Weyerhaeuser Timber Co., Longview; J. W. Wenger, Central Technical Dept., Crown Zellerbach Corp., Camas; Peter M. Wilkie, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; Albert Wilson, Pacific Pulp & Paper Industry, Portland; F. K. Zaniker, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., West Linn; Herbert Wyomere, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; Edward P. Wood, Pulp Division Weyerhaeuser Timber Co., Longview; Geo. Wolfe, Pulp Division Weyerhaeuser Timber Co., Longview.

Industrial Welding in the Paper Industry As Applied to Beater Lifting Tackle

by FRANK K. ZANIKER*

CONVERSION, Conservation, and Curtailment, the so-called "Three C's," dominate the entire paper industrial picture today. Conversion to war production of plants now engaged in civilian work. Conservation of war materials, which are needed for war production, and Curtailment of plants which cannot shift and cut down on the civilian supplies. As paper is a civilian commodity, its plants cannot be converted directly into war purposes. However, it is a civilian commodity absolutely essential to the conduct of the war and such civilian business that may be left. Through the magnitude of the war effort, the paper industry is now mobilizing for its part in the war economy.

The pulp and paper industry has grown to such proportions that today it ranks among the first ten

important industries in the United States. It is through this outstanding growth and expansion that the papermaking machinery is playing such an important part in the paper industry. Today, when the imports of wood pulp of all kinds from Europe have been cut off, the United States' and Canada's pulp and paper industry has increased output to meet requirements.

The great increase in the production of paper imposed great strain on the papermaking machinery, thus making it necessary to make repairs and replacements oftener. Under present conditions this is all costlier. A great deal of new equipment also had to be installed in order to take care of the demand. As the securing of new papermaking equipment is almost impossible, at this time, when the entire nation is under war production, the paper manufacturers had to resort to repairing and to making their own machine parts that are worn out and must be replaced.

In order to keep their papermaking machinery in working order, all the major paper manufacturers have their own mechanical departments, such as, machine shop, welders, patternmakers, and repair mechanics. The papermaking machinery consists of many pieces and all must be

in good mechanical order before the finished product will roll off the paper machine. One of these important machines is called the Beater.

Some of these are very old and any breakdown in them, or the lifting tackle, will cause a slow down in the production, many times as much as 50 per cent, and oftentimes the paper machine may be out of working order for several hours before the repairs can be made. Under the present conditions it is almost impossible to secure the replacement of the cast iron parts from the foundry, so the necessary repairs must be made by our own mechanical departments.

As most of our breakdowns occur in our dry broke beaters, I will use that type in my discussion.

By the sketch in Figure I you will see the size, thickness, and proportion of the lifting tackle. It also shows the broken line where the fractures occurred. The photograph of the casting shows the fractures, which were repaired of cast iron. This weighs 430 pounds.


Welded Construction Replaces Cast Iron

● We have had three breakdowns on these lifting tackles in three different beaters, and after the second

*Supervisor, Welding Department, Crown Willamette Paper Company, Division of Crown Zellerbach Corp., West Linn, Oregon. Presented at the Dinner Meeting sponsored by the Pacific Section of TAPPI, at Camas, Wash., November 3, 1942.

Mr. Zaniker's paper was submitted in the James F. Lincoln Arc Welding Foundation's recent contest for ideas dealing with the use of arc welding in industry. The paper was awarded \$100 as a prize in the "Industry Machinery, Processing" division.

In publishing Mr. Zaniker's paper space limitations have made it necessary to brief certain parts.



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NOW, IT'S SARAN PIPE—a thoroughly practical plastic pipe, that can be welded in less than one minute—a pipe of special importance at this time, because it replaces materials urgently needed for other purposes.

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break was repaired and casting back in service, I contacted the engineering department and master mechanic and suggested to them the replacement of the cast iron lifting tackles with welded construction. As we have successfully replaced numerous castings with welded construction in the past, they agreed to have the welding done. As the cast iron replacements are impossible to obtain, we would have had to make a new pattern.

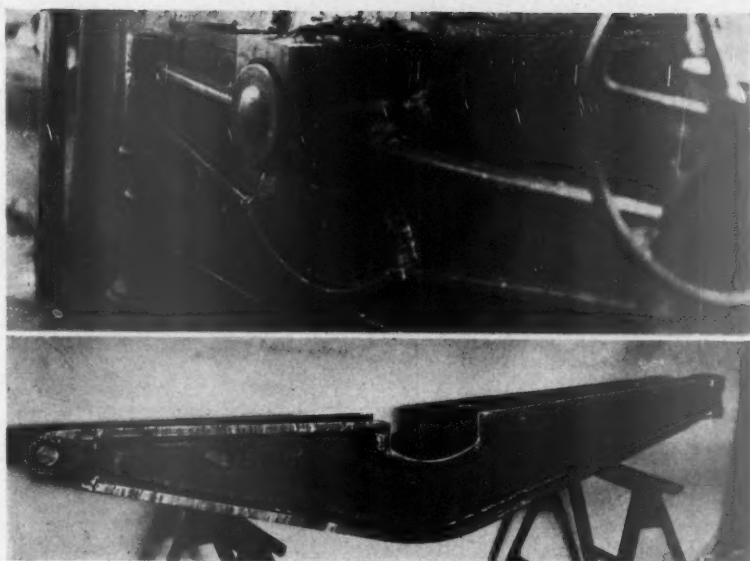
After I explained to the two department heads that the redesigning for steel welded construction is fairly simple and that the structure can be easily duplicated for shape and that it could be made much lighter, they placed the entire responsibility of replacing the structural part in my hands, as welding supervisor for the Crown Zellerbach Corporation, West Linn, Oregon plant. They expressed confidence in the arc welded construction. The welding department handles all the arc welding, making of first-hand sketches and drawings, laying out of a templet, and finally the laying out of steel plates. I supervised the welding procedure as part of my normal duty.

As we have welders and cutters of long service, it was a simple task to have the cutting done to the exact size. The welders chosen were for their known qualities of reliable and consistent workmanship. No special tests were imposed on these men since this practice is not favored by my Company. The systematic and regular inspection of work while in progress, by a person competent to advise and to instruct the welders engaged, is believed to be the surest method of maintaining a high standard. However, it is unnecessary to specify amperages too closely since work of the same standard is frequently produced by different welders using different current values.

As a matter of routine, three tensile tests are taken every ninety days in order to avoid any possibility of trouble from welding defects made by our welders. The value of this precaution has been proven. All the shielded electric arc welding was done with standard made welding machines in accordance with the best modern standard welding practice of the American Welding Society.

Skip Sequence Used

• The skip sequence of welding was used. The maximum length of a bead, in any one pass, was what can be laid with one electrode. As the welded sections were one inch



Above, fractured cast iron beater lifting tackle repaired by brazing. Below, new tackle of 1-inch steel plate arc welded, as designed and welded at the West Linn, Oregon, mill of the Crown Willamette Paper Co., Division of Crown Zellerbach Corp., by Frank K. Zaniker, Welding Supervisor.

in thickness, two passes of the electrode were used. The root welds were made with 5/32-inch rod and the back bead was made with 1/4-inch rod. Special attention was given to the application of the first pass to insure satisfactory penetra-

tion and fusion of the filler and base metals. When the welding was completed, inspected and found without defects it was stress relief annealed.

It is possible to produce from rolled bars, plates and structural shapes, complete machines. Con-

The Actual Cost of Lifting Tackle Casting Failure As Computed From Our Records

10 Hours Production, 1 Ton an Hour, \$60.00 Per Hour	\$600.00
2 Mechanics, 6 Hours Each, \$1.10 Per Hour	13.20
2 Helpers, 6 Hours Each, \$0.97 Per Hour	11.64
1 Welder, 4 Hours, \$1.15 Per Hour	4.60
2 Welding Helpers, 4 Hours Each, \$0.95 Per Hour	7.60
Oxygen Used in Welding, 110 Cubic Feet, \$0.03 Per Cubic Foot	3.30
Acetylene Used in Welding, 105 Cubic Feet, \$0.07 Per Cubic Foot	7.35
Oil Used in Pre-heating, 5 Gallons, \$0.20 Per Gallon	1.00
11 Pounds of Bronze Rods, \$0.20 Per Pound	2.20
3 Men Lost Time (30 Hours), \$1.12 Per Hour	33.60
The Original Cost of Casting	86.00

TOTAL COST IN PRODUCTION AND LABOR \$770.49

Cost Analysis of Beater Lifting Gear Welded Steel Construction

First-hand Sketches and Templets, 2 Hours, \$1.20 Per Hour	\$ 2.40
Torch Cutting to Templets, 3 Hours, \$1.10 Per Hour	3.30
Forming and Rolling Outside Flanges, 1 Hour, \$0.97 Per Hour	.97
Setting Up and Tack-welded, 2 Hours, \$1.10 Per Hour	2.20
Arc Welding Complete, 12 Hours, \$1.10 Per Hour	13.20
Material—380 Pounds of Steel-plate, \$0.0257 Per Pound	9.77
Shop Work—2 Holes Drilled, 1 Hour, \$1.12 Per Hour	1.12
Gas Consumption—Oxygen, 83 Cubic Feet, \$0.03 Per Cubic Foot	2.49
Gas Consumption—Acetylene, 8.3 Cubic Feet, \$0.07 Per Cubic Ft.	.58
Electrode Used, 33½ Pounds, \$0.21 Per Pound	7.00
Electric Generating Power Used	1.00

TOTAL COST \$ 44.03

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Bellevue Washington

structions can be strengthened by lessening the weight and using alloy steel where needed. This is the remarkable advantage of arc welding.

Welded Design

● The welded design, as illustrated in Figure II follows closely the lines of the original design for foundry casting. The only change was that the outside lines were drawn tangent from the lower extremities of the arc to the extreme outside supports. The design incorporates all parts and attachments which properly may be regarded as permanent components of the frame structure.

Figure III shows in detail, with dimensions, every piece of steel used in the welded construction of the lifting tackle which supports the beater roll weighing between four and five tons.

When the first failure occurred on November 17, 1941, the paper industry was operating at full capacity but no spare parts could be secured for this type of casting due to the war production.

In the failure of the second lifting tackle, the procedure was almost the same in repairing and restoring it back in operation, only, the actual cost, according to our records, was slightly less than \$683.45.

When the second failure occurred January 7, 1942, our welding department prepared a spare welded construction. The cost of redesigning for steel welded construction is explained below. Estimates of savings are also stated.

Advantages to the Mill

● By building beater lifting tackle in our own shop, we increase the probability that the beater will operate with a minimum of lost time. This is especially true when the job is done by arc welding

In building an arc welded structure, all of the work is done in our own shop and is, therefore, controlled. Patterns do not have to be sent out, outside bids do not have to be obtained, the job does not have to be fitted in with a schedule of another plant, and, finally, the piece does not have to be brought back to our shop. A welded piece may be obtained in only a little more than the time required to perform the labor. Another hazard eliminated by the use of arc welded construction is the problem of time lost, if a casting proved faulty. In consideration of the savings, my company has decided to replace all

Cost Analysis of Beater Lifting Gear Cast Iron Construction

If the casting was to be replaced with new cast iron construction it would have to come from Yorktown, New York—freight to be paid by the purchaser:

Weight of cast iron casting—430 Pounds, \$0.10 Per Pound	\$ 43.00
Estimated Time for Moulding—10 Hours, \$1.50 Per Hour	15.00
Freight Charges from Yorktown	70.00
TOTAL	\$128.00

If the casting was to be made in the foundry at home the cost would be higher, as the new pattern would have to be made:

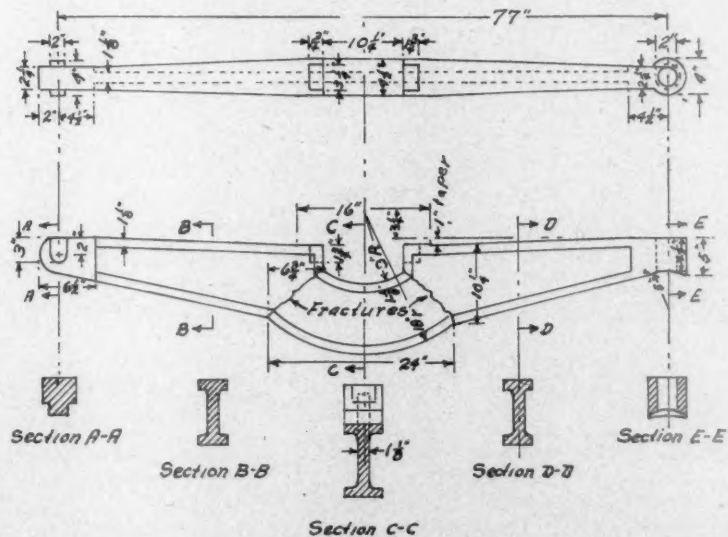
Estimated time for pattern—34 Hours, \$2.25 Per Hour	\$ 75.00
Estimated material—45 feet of cedar	11.00
Estimated time for moulding—10 Hours, \$1.50 Per Hour	15.00
Weight of Casting—430 Pounds, \$0.10 Per Pound	43.00
TOTAL	\$144.00

It has been proven that the welded design is lighter than the cast iron design, although the saving in weight, in the present case, is only 8.83%. This is caused by the increase of the concentrated load on the beam due to the speed-up production. The factor of safety, under alternating live load in the old construction, was nine, and under new construction the factor of safety was taken as twelve. If the beam had been constructed under the safety factor of nine, a three-fourths inch plate could be used instead of one-inch. With this procedure 42 per cent of the weight would be saved.

Total cost of finished beam from factory delivered to the Crown	
Zellerbach Corp., West Linn, Oregon	\$128.00
All-welded construction at the plant	44.03
TOTAL SAVED	\$ 83.97

This is a saving of \$83.97 or 65.6%.

Total cost of finished beam delivered from the coast foundry	\$144.00
All-welded construction at the plant	44.03
TOTAL SAVED	\$ 99.97



The Original design of lifting tackle casting C.I. Construction
Fig. I
Scale 1" = 12"

This is a saving of \$99.97 or 69%.

The average cost of the lifting tackle cast iron construction between the factory at Yorktown, New York, and the Coast foundry is \$136.00, and the cost of all-welded steel construction done in our own shop is \$44.03.

Average cast iron construction	\$136.00
Welded steel construction	44.03

Saving Cost Per Complete Unit	\$ 91.97
-------------------------------------	----------

This is a saving of 47½%.

The total estimated gross saving annually, by our corporation by adopting welded steel construction in our beaters, will be \$1,103.64 for an estimated twelve annual breakdowns.

the machine parts with welded construction.

Every paper manufacturer, who has Hollander beaters in his plant

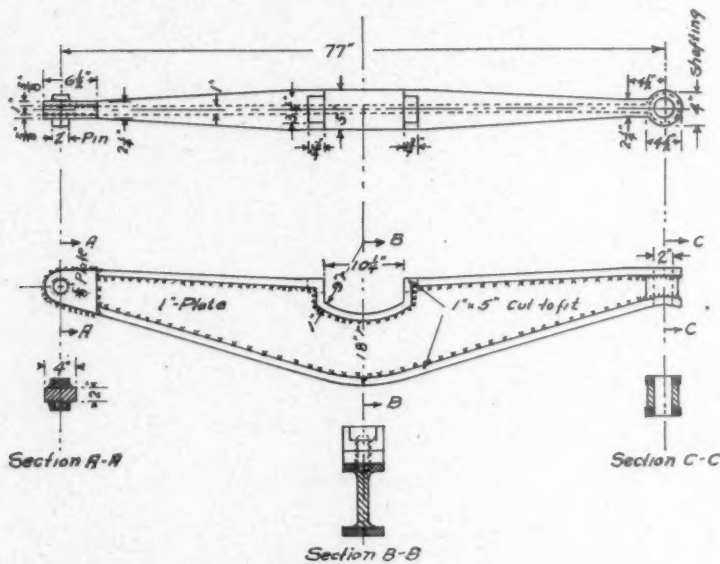
should manufacture an all-welded steel beater lifting tackle as a spare. When our second breakdown occurred on January 7, 1942, I went

to work and replaced the casting with an all-welded construction as a spare.

When another breakdown occurred on May 4, 1942, in a third lifting tackle, it was replaced with our spare. There was no interruption in the production as the part of the machine was replaced in two hours by our mechanics at the cost of \$10.00—as against our first breakdown cost of \$770.49.

It has been my experience, through years of welding, that any failure occurring to paper mill machinery will usually involve a great deal of lost time and money, because the machines are of special make and take longer to replace. Hence, reliability is again stressed for its importance. Steel is the only material that will supply this necessary reliability.

Arc welding is the only method, where steel may be fabricated in a completely predictable and reliable manner. The costs and conditions, therefore, apply to the whole paper-making industry. The savings and the advantages of arc welded construction are, therefore, limited only by the extent to which it is employed by engineers and maintenance men of the industry.



Redesigned beater lifting tackle all welded construction
Fig II

Scale 1"=12"

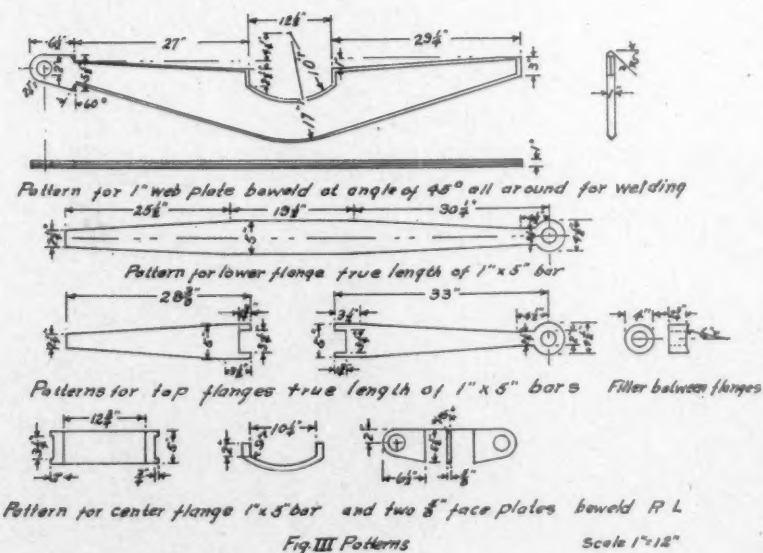
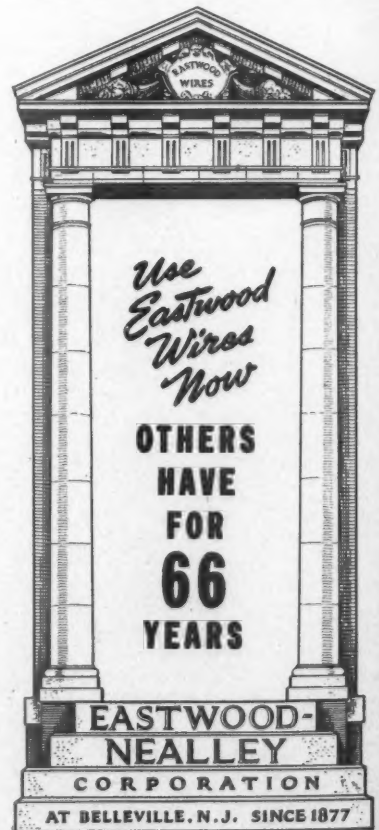


Fig. III Patterns

Scale 1"=12"



Crown Announces New Diphenyl Citrus Wrap

● "Coming at a time when citrus fruit protection and preservation is more vital than ever before, Crown Zellerbach Corporation is pleased to announce the DIPHENYL WRAPPER, newest addition to the Crown family of fruit protective paper wrappers," reads the opening statement in a booklet announcing the new citrus wrap.

"Our central research laboratory has, after ten years of painstaking work, created the Diphenyl wrapper especially for citrus fruits and is convinced by experiment and experience that it is worthy of your attention as having elements that will add greatly to the protective nature of the usual paper wrapper for oranges, grapefruit and lemons.

"Diphenyl is a treatment given the usual citrus fruit wrapper in the process of manufacture whereby a pure white, crystalline substance of cleanly 'sanitizing' smell is added. Of many substances investigated, our chemists concluded that diphenyl was so outstandingly effective in control of *Penicillium Italicum* and *Penicillium Digitatum*, the common 'blue' and 'green' molds, that growers, wholesales, retailers and consumers of oranges, grapefruit and lemons should have its benefit . . .

"Blue and green molds, so devastating to citrus fruits, are, in fact, miniature plants, starting their growth from spores, or seeds. Before you can see their tiny 'blossoms' breaking out on the rind surface, these spores have already projected their roots to gain a foothold down inside the pulp tissue. Now, these molds breathe, the same as any plant, and it is through their breathing that diphenyl does its work. They are made to breathe in an atmosphere charged with minute, vaporous particles of diphenyl; in an atmosphere they do not like, and in which they cannot grow and thrive."

Wrappers Fully Tested

The new Crown Zellerbach citrus wrap has been tested for two years. Carloads of diphenyl-wrapped citrus fruits have been shipped into various markets—New York, Chicago, Cincinnati, Detroit, Fort Wayne and Vancouver, B. C. Results have been successful without exception.

A scientifically treated tissue wrapper with protective and preservative qualities for grapefruit, oranges and lemons.

The treatment of fruit wraps with diphenyl is covered by U. S. patent 2,173,453. This is the third patented development by Crown in the field of fruit wraps. The first, the Crown Insoluble-Coppered Hartman Wrap for winter pears has been used successfully for the past ten years to protect the fruit from *Botrytis mycelium*, "gray mold" and "nest rot." It is covered by U. S. patent 1,988,231.

The second development was Crown's Semi-Creped Wrap, ribbed and ruffled for softness to protect apples and pears. This process was patented likewise; U. S. patent 2,114,701.

The booklet concludes with the statement that the Crown Zellerbach Corporation is "The Largest Manufacturers of Scientifically Protective Fruit Wrapping Papers in the World."

Field Named a Director Of Sidney Roofing

● R. W. Mayhew, president of Sidney Roofing & Paper Company of Victoria and Vancouver, B. C., announces the appointment of Patrick W. Field, general sales manager and manager of the company's Vancouver office, to the board of directors.

Mr. Field has been with the company for the past fourteen years and has been a prominent figure in paper and construction circles in British Columbia. He has been chairman of the British Columbia Products Bureau of the Vancouver Board of Trade for several years.

At present Mr. Field is on a flying trip to eastern business centers.

Percy Willoughby Elected to Legislature

● Percy Willoughby of Bellingham, cook and acid maker for the Puget Sound Pulp & Timber Company until last month, was elected state representative from the 42nd district at the November 3rd election.

Mr. Willoughby served four terms as president of the Bellingham local of the International Brotherhood of Pulp, Sulphite & Paper Mill Workers.



CROWN ZELLERBACH CORPORATION'S CARTHAGE, New York, mill wins the Minute Man Flag indicating 100% participation in the payroll deduction plan for War Bonds. Nearly 10% of the total payroll is going into bonds. The Watertown, N. Y., Gazette, commenting upon the presentation stated that the National Paper Products Company Division is the first industry in Jefferson county and one of less than a dozen in the state to earn the right to fly the Minute Man flag.

Left to right, WILLIAM DALTON, Carthage, President of Local No. 118, International Brotherhood of Pulp, Sulphite & Paper Mill Workers; EMERY SANTAMOUR, President of Local No. 93, International Brotherhood of Paper Makers; PETER T. SINCLAIR, Manager of the Carthage mill; LESTER H. MORGAN and ALVIN C. WALLACE, both of the Jefferson County War Bond Committee.

More C-Z San Francisco Men Join the Service

● Five bright stars have been added to the Crown-Zellerbach San Francisco, Service Flag.

R. G. Shephard, private secretary to President J. D. Zellerbach, observed Armistice Day by reporting for duty as a private in the Army. His temporary leave terminates 11 years with the company.

Raymond Mathes, for eight years warehouseman with the company, has enlisted in the Army.

James M. Thomas, popular member of the sales staff for the past four years, enlisted in the Army Air Corps.

James D. Zellerbach, son of President J. D. Zellerbach, who last month at Portland enlisted as an Army Air Cadet,

has been called to a Texas field for intensive training.

Ray Schadt, for many years assistant to vice-president Albert Bankus, until last June when he was drafted for duty with the Pulp & Paper Branch of the War Production Board, has been commissioned a captain in the Army, and now is on special duty at Midland, Mich.

Suggestion Awards Given to 32 Camas Men

● Awards for suggestions to improve equipment and methods were made October 29th to 32 men in the Crown Willamette Paper Company, Division of Crown Zellerbach Corporation, Camas, Washington.

Ideas offered by the following men were accepted: Ross H. Armes, Carl

Aslin, B. Bancke, Fred H. Blomenkamp (2), Carl Britton, Don Capps, E. M. Coop, R. Cory, H. Anderson, E. F. Evans, W. E. Garrod, Francis L. Groth, J. Holmberg (2).

James Kielpinski (3), Ronald W. Kirkpatrick, Frank Lehn, Kenneth Ludwig, Fred Marks, C. Morasch, J. Neely, Archie Paris, Tony Pleiss, T. E. Dear, H. Rickard, Dick Roberts, D. G. Slot-hower, C. Tuttle, Russell Whitely (2), C. B. Wise, Arthur J. Witkowsky, A. B. Wright and Lawrence Wright.

Bud Hall was given an additional award of \$27.39 for his suggestion for improvement of conveyor chain flights.

The ideas submitted range the entire mill and all aim to improve operating efficiency, through the saving of time or material.

Canadian Paper Mills Expect Severe Rationing Plan

● Executives of British Columbia paper mills are keeping their fingers crossed until the Canadian government announces its proposed rationing plan.

In the meantime they are obtaining detailed information regarding the inventory position of their customers, as these figures will be a guide in future allocation of tonnage.

So far there has been no definite intimation of the percentage reduction in production, although hints have been as high as 35 per cent. At present the mills have been permitted to operate on a basis equal to the production during the April-September period, but this is regarded more as a test of the new control measure rather than as an indication of the way future rationing will be applied.

The general supposition is that the mills will be asked eventually to supply their previous customers on a quota basis. This would prevent any discrimination and enable all publishers to maintain their supply subject to the reductions ordered by the newsprint division of the Wartime Prices and Trade Board.

Major objectives of the newsprint curtailment program is to conserve men and materials and, in the case of British Columbia, to provide more timber for lumber production.

One of the major industrial bottlenecks in British Columbia is in lumber, which is now down about 25 per cent as compared with last year's records. The greatly increased use of hemlock by the sawmills and the airplane industry has created competition for the pulp and paper mills which, under wartime conditions, must take a secondary role in having their requirements met. With a limited amount of hemlock and spruce being produced, due to manpower shortage and other factors, and with the government determined to increase lumber production, curtailment in pulp and paper operation was inevitable.

Camas Office Employees Remember Those In Services

● R. E. (Dick) Lawton, of the office staff of the Camas mill of Crown Willamette Paper Company, revealed himself as a poet of parts in helping out in a little demonstration of remembrance to the departed office staff workers now in uniform. Twenty-six of them joined up and more than \$80 was raised by office workers left behind to provide them with cash Christmas presents.

Louis Blackerby Joins Army— Al Wilson Takes Over

LOUIS BLACKERBY, who for the past two and a half years has ably represented Pacific Pulp & Paper Industry and West Coast Lumberman in Oregon and Southwestern Washington, enlisted in the Engineer's Forestry Corps on October 21st, and is now at Fort Lewis. In the Army he is following his education and much of his experience, which included a degree in forestry from Oregon State College and several years in logging and sawmilling prior to entering the industrial publication field. His friends in both industries wish him the success in the Army that he had in his civilian work.

Albert Wilson, who takes over the editorial work in the important Oregon and Southwest Washington field of the two journals, is an experienced investigational reporter and interpretive writer on large industries in the international field. For 15 years he covered assignments in more than 20 countries of Europe, Asia and Africa. For more than ten years he was foreign correspondent for the Associated Press. Prior to that period, for shorter terms, he was employed successively by two outstanding dailies, The Chicago Tribune and the New York Evening World. In 1925 Albert Wilson graduated from the School of Journalism, University of Washington, after serving in his senior year as editor of the University Daily.

His career with the Associated Press included service as a war correspondent in Ethiopia and a diplomatic correspondent at many international disarmament, naval, wheat, cotton and other conferences in London, Paris, Budapest and other foreign cities. He was in Germany before and after Hitler, in Spain, the Balkans and Egypt, twice each, and in other countries as far removed as Turkey, Czechoslovakia, Ireland and Spanish Morocco.

For three years Albert Wilson covered the Prime Minister at No. 10 Downing St., London, and the Foreign Office on the same little street. In tropical climes his health suffered, and, after a year of writing interpretive background articles on the war

out of New York for 1400 Associated Press papers, he moved back to the Pacific Northwest, deciding to make his permanent home in this region.

Albert Wilson was born in Seattle of a logging family. In his childhood days he was as much at home in the house-next-door of his uncle as in his own domicile. This uncle was the late James Roe, who was the first woods manager in the west for the Stimson Mill Company. Mr. Roe, who lived to be 86, "raised" three generations of Stimson loggers during his 67 years in the service of that company, having "broken in" some of the grandsons of the first Stimson loggers who worked under him. After directing Stimson logging in Michigan for some years, Mr. Roe moved west to Seattle in the same capacity in 1889, when he directed the first logging for Stimson in the west at Kingston, Wash., using oxen.

Another uncle, William Henry Wilson, at one time owned and operated a sash and door factory and four sawmills in Clare County, Michigan, and owned and logged timber lands in Michigan and Alabama.

Albert Wilson's father, Frank B. Wilson, made his first "stake" homesteading and selling timber in northern Michigan and surveyed timber owned by his above named brother in Michigan and Alabama. But when he moved to Seattle in 1897, he turned to merchandising, outfitting Alaska gold seekers, and later operating three book and stationery stores, a business distinctly dependent on the pulp and paper industry. One was the well known Archway Bookstore.

While he was attending the University of Washington, Albert Wilson spent several summers working in lumber mills at Coeur d'Alene, Idaho, and Olympia, Washington, and in the logging camps of Schafer Brothers in Grays Harbor.

He will make his headquarters in Portland at the offices of Pacific Pulp & Paper Industry and West Coast Lumberman in the Terminal Sales Building at 1220 S.W. Morrison St., Portland.

To go along with the money, divided equally among the 26, Dick Lawton wrote a rollicking poem of 200 lines, including couplets of gossip about nearly every one in the office. The poem ended up with a frank admission that many of those in the office are just waiting for their day to get the high sign from Uncle Sam.

Bellingham Bowlers Competing Again

● The Pacific Coast Paper Mills of Bellingham have a bowling team of real prowess. In a hotly contested series with three other teams, one of which was from the Puget Sound Pulp & Timber Company mill, the papermakers not only took home the crown but acquired some cash as well. At least it was so reported by sources believed to be reliable.

The paper mill team is composed of Frank Bloch, Bill Dynes, Pete Onkels, Bill Herb and Jeff Marett.

Flett East at Selective Service Conference

● Frank Flett, personnel manager of Powell River Company, Vancouver, B. C., is attending a conference of the National Selective Service Commission in Ottawa, dealing with manpower problems of the Canadian pulp and paper industry.

Texas Gulf Sulphur Awarded Army-Navy "E"

● The Texas Gulf Sulphur Company received the Army-Navy "E" flag for outstanding accomplishments in the production of war materials in a ceremony Monday afternoon, November 2, at Newgulf, Texas. More than four thousand employees of the firm and their guests heard the company's achievements lauded in speeches by brigadier general Ray L. Avery, commanding officer, Edgewood Arsenal, and commandant, chemical warfare school, and rear admiral P. W. Foote, United States Navy.

In conferring the Army-Navy "E" award flag to the employees of the Newgulf mines and the Galveston loading plant of the Texas Gulf Sulphur Company, brigadier general Avery said: "The award . . . is indeed a military decoration. It is being conferred upon the field of battle. Would that it could be upon the field of victory; but, unfortunately, victory is not yet ours. By rapid strides, taking for granted the full cooperation of each and every one of you, victory will be ours and at that time an award far greater than any will be forthcoming. While you may well be proud of your accomplishments to date, I urge each and every one of you to keep firmly in mind the message which I have attempted to convey: **VICTORY IN THIS GREAT CONFLICT WILL BE OURS ONLY AS A RESULT OF YOUR CONTINUED UNTIRING EFFORTS IN THE FIELD OF PRODUCTION.**

"Your Government has officially determined that the Texas Gulf Sulphur Company shall be included among those organizations engaged in war production which occupy a position in the upper strata of our war industry; and this enviable distinction has been achieved in its entirety because of the diligent and untiring efforts of each and all of you here present today. The manner in which you have assumed and discharged the duties incumbent upon you as Americans is worthy of the highest praise. In this behalf, I extend to you sincere congratulations."

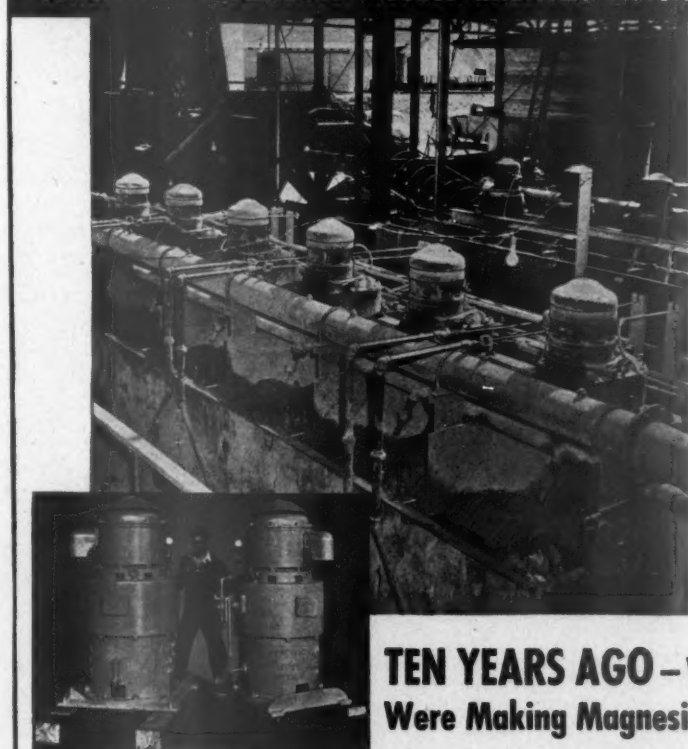
As Mr. Walter H. Aldridge, president of Texas Gulf Sulphur Company, has indicated, sulphur has proved to be one all-important raw material available in amounts equal to demand—one war material at least where it has been unnecessary to search either for new sources or new methods of production.

Today supplies of sulphur in the United States are ample, so that it is no longer called a critical material—but this has not always been the case. Originally the sulphur consumed in the United States came from Italy and Japan, and when the cost of this imported sulphur became prohibitive, acid manufacturers turned to pyrite from Spain as a raw material. The American consumer, however, was almost entirely dependent on foreign sources for supplies of sulphur

or sulphur bearing materials. Fortunately, at the beginning of the present century, the foundations of the American sulphur industry were laid so that fourteen years later, in 1917, a domestic source of sulphur existed.

Today we are again engaged in a war. Large imports of pyrite from Spain are out of the question. U-boats, sea raiders and enemy control of foreign deposits, however, cannot prevent us from obtaining the sulphur necessary for our war effort. The North American continent has become self sufficient in sulphur and its factories can readily obtain all of their requirements. Further, the American sulphur industry is able to supply sulphur to our allies in quantities sufficient to meet their most exacting needs.

PEACE-TIME EXPERIENCE INSURES WAR-TIME EFFICIENCY



TEN YEARS AGO - We Were Making Magnesium

★ We didn't know back in 1932 when we worked with the City of Sacramento on water purifying problems that we were starting on war processes. But we were! We designed two huge motor gear drives (picture left) to agitate flock in water purification tanks. From those units we progressed steadily—reducing size—increasing efficiency.

Now, look at the flotation cells in Basic Magnesium Co.'s huge new magnesium producing plant at _____ (picture above). Experience helped us give them better variable speed power units. Our experience can help you too, when your plant needs power drives.

PACIFIC GEAR & TOOL WORKS SAN FRANCISCO
WESTERN GEAR WORKS SEATTLE
 ASSOCIATED COMPANIES
 WESTERN GEAR WORKS—Lynwood, California
 PACIFIC GEAR WORKS—Los Angeles, Calif.



Sixteen Ways to Add Life To Your Felts

● Is the title of a booklet just issued by the Orr Felt and Blanket Company of Piqua, Ohio. "Wool is precious—wool is a vital war material—wool must be saved," says the foreword. "The information is not new. All superintendents know these facts. But perhaps some points have been recently overlooked, and if such a reminder is a means of adding life to your felts, our purpose will have been accomplished."

The sixteen points:

1. Do you check suction box covers for splinters and abrasives and dress them frequently? Experience has shown that a surprising small amount of foreign material or an almost imperceptible flaw in the cover will substantially cut down felt life.
2. Are you extra careful with wetting out agents when breaking in a new felt? Here is a case where the old proverb "Haste makes waste" certainly applies.
3. Do you examine rolls, boxes, and journals for surface grease and remove at once if found before attempting to place a felt on the machine? And if you do get grease on the felt, do you take immediate steps to remove it?
4. Have you instructed your felt checker to pay closer attention to the seam and correct even small misalignments? We all know what happens when a felt is allowed to run out of true. But old allowances for error must be drastically reduced if we are to get maximum felt life.
6. Have you recently checked felt rolls for balance? Rolls out of balance are out of alignment which means uneven tension on the felt . . . which in turn means wear. Also, have you checked felt rolls for free turning? The less resistance to turning, the less drag on the felt, the less wear.
6. Is your felt cleaner, particularly those parts touching the felt, in excellent condition? Here is a point often overlooked. Set the adjustment too close and off goes the nap . . . set it too far away and ineffective cleaning results. Where on this delicately balanced scale does your felt cleaner fit?
7. Are you certain that your felt stretchers are operating freely? Here is another case where the easier the turning, the less drag on the felt. The next time you change felts, give these rolls a spin with your hand and see what happens.
8. Do you know whether or not the crowning of your press rolls is correct? Here is something you can't check in a minute and yet it will be worth your while to do so. Uneven wear in many cases can be laid directly to the incorrect crown. And while you're checking, take a look at press roll alignment.
9. Are you sure that your whippers are operating evenly and with the correct amount of whip? We all know that faulty whippers can beat the life out of a felt and yet it is surprising how many whippers in operation today are doing just that. Don't fail to check yours.
10. Are holes in shower pipes open and applying the correct spray? It is obvious that a clogged hole does no cleaning. But not so obvious is the fact that clogging increases the pressure at the open holes, sometimes to the point where felt damage may result.
11. Do you check water temperature and insist that correct temperature be maintained? Few people realize the great importance of heat in cleaning. What at first may seem like a trivial matter, often turns out to be something of unusual importance. Make sure you are getting the water temperature recommended.
12. Have you checked for the presence of iron hydroxide in the water? This is the chemical that makes felts stiff and boardy. If you find it, it will pay you to do something about it.
13. Are deckles on board machines smooth and free from rough edges? Naturally, this point will not apply to all mills, but to mills with deckles, it is a matter of importance. Here again, even slight imperfections should be removed before they wear the felt edges.
14. Have Orr sales engineers told you about the latest method of cleaning, drying and storing felts? This subject may sound elementary, yet these engineers have many in-



Reduces "Time Out"

Stebbins "Knowledge" gained through fifty-eight years of designing, installing and servicing acid and corrosion-resistant linings in pulp and paper mills assures a trouble free installation.

There is a Stebbins Quality Lining for every lineable tank or vessel.



SEMCO

Stebbins Engineering Corporation

TEXTILE TOWER

SEATTLE, WASHINGTON

teresting and valuable suggestions to make. Ask for details the next time an Orr man calls.

Look to your worm rolls. The slightest depression, out of balance condition, or other operating fault can raise havoc with a felt. All too often mills slip on the worming of their felting.

The same is true when it comes to weighting a roll. Check at the back side as carefully as at the front of the machine. Be painstaking. Don't guess.

16. The sixteenth way to add to felt life is to call in an experienced felt man when the mill runs into a difficult problem. Four examples that were solved by Orr are cited.

Photographs of Orr's five field men appear, Frank B. Eilers, John L. Purdy, Norman B. Scott, Darwin Miscall and Leonard McMaster, who is Pacific Coast representative with offices in the Pacific Building, Portland, Oregon. Copies of the booklet are available to all mill men from Mr. McMaster or from the Orr plant in Piqua, Ohio.

Dexter Heads Navy Conservation Program

● Oakley Dexter, recently "borrowed" from his work as head of the purchasing department of Crown Zellerbach Corporation, San Francisco, for service with the WPB in Washington, D. C., has been appointed coordinator of conservation of the Navy, and authorized to direct the Navy's program of conservation.

The newly-created office was said to represent a consolidation of various activities placing the entire responsibility in one department, now headed by Mr. Dexter.

He is on leave from Crown-Zellerbach for the duration.

War Bond Sales Rise At West Linn

● War bond sales at the West Linn plant, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., were up another point to 11.2 per cent of the payroll in October as over the September record. Union committees have handled the campaign entirely at this mill and have done yeoman service in establishing this fine sales record.

Southern Kraft Announces New Solid Fibre

● The Southern Kraft Division of the International Paper Company, 220 East Forty-second Street, New York, has developed a new solid fibre, designed for packaging of war materials instead of corrugated paper.

The new material, it is said, insures dry contents even when submerged in water for two to three hours, and similarly, will stand more abuse and hard usage than corrugated paper stocks. It is proposed to continue the production of the new solid fibre after the war for use as a paperboard building material and other kindred service.

Miss Johnson Recovers From Auto Accident

● Miss Wilma Johnson, secretary to vice president Lawson Turcotte of the Puget Sound Pulp & Timber Company, returned to her desk early in November fully recovered from injuries received in a recent automobile accident.

The accident occurred twenty miles from Bellingham as Miss Johnson was returning from a vacation trip to California.

Science Aids Toward War Time Self-Sufficiency


● In World War I, says Foster D. Snell, Inc., chemists and engineers, the United States had to import 42 materials for defense. Scientific research has reduced the number to 14 in World War II.

West Linn Grinding Operations Resume

● Heavy early November rains raised the Willamette River so that the West Linn mill of the Crown Willamette Paper Company, Division of Crown Zellerbach Corp., was able to resume grinding operations. When the river is high, West Linn grinds and stores enough pulp to provide for manufacturing during the dry months.

IDEAS WANTED

Pulp and Paper Mill Equipment Manufacturer will develop and market your invention on a royalty basis. Write box 14, Pacific Pulp & Paper Industry, 71 Columbia Street, Seattle, Washington.



Here's a very simple device for adding life to industrial hose, whether it's air, steam or water. Place 2 x 4's parallel with enough space between them to lay the hose. A couple of cross pieces at either end is sufficient to hold them in place. This makes an effective guard for temporary vehicle crossings, indoors or outdoors.

Where the crossing is more or less permanent, however, corners should be rounded or beveled. Post signs that will slow traffic to avoid injury to tires. You will get greater service and value from hose by thus protecting it; you will be helping to conserve vitally needed rubber by requiring less frequent hose replacements.

VICTORY before "VICTOR"

"Victor" has long been Pioneer's top brand...the finest in conveyor belts and hose. The fine grades of crude rubber used in its manufacture, however, now must serve ships, planes and tanks almost exclusively. Meantime, skillful blending of age-resisting chemicals with allowable rubber enables Pioneer to continue producing high grade mechanical rubber goods to emergency specifications. PIONEER RUBBER MILLS, 353 Sacramento St., San Francisco, Calif.

PIONEER

Job Tailored
CONVEYOR BELTS

APPLETON WIRES

are Good wires

Appleton Wire Works, Inc. Appleton, Wis.

Pacific Coast Representative: BEN NATWICK, 11572 S. W. Riverwood Road, PORTLAND, OREGON

**REPLACE YOUR
OWN
"BLOWN" FUSES**



MOST of the service calls we receive result from "blown-out" fuses. In the past we have provided this service gladly, but wartime shortage of men and the urgent necessity for conserving tires and other essential materials require some restrictions in service for the "duration."

We shall continue, of course, to take care of emergency calls as promptly as possible.

You can help us conserve and at the same time save yourself time and inconvenience if you know how to replace a "blown-out" fuse. It's as simple as changing a light globe.

**PUGET SOUND
POWER & LIGHT
CO.**



Salvage Outline Lists Ten Suggestions

● An outline for getting out industrial scrap has been issued by the American Industries Salvage Committee representing groups of industrial concerns and operating with funds provided by them.

The ten suggestions for keeping scrap moving are:

1. Head up the campaign by appointing an able executive of the company, armed with authority to act.
2. Use posters, illustrations, pay-envelope stuffers, and all other publicity means to enlist all employees in scrap campaign.
3. Comb plant and yards for dormant scrap and unusable and abandoned equipment.
4. Survey all plant equipment, particularly idle, standing or discarded machines.
5. Classify and segregate scrap and supervise its handling.
6. Make each foreman responsible for preventing spoilage and waste in his department.
7. Report promptly equipment which is obsolete. If equipment has not been used in three months, and it can't be proved that it will be used in the next three, turn it over where it can be used . . . or scrap it.
8. Salvage usable parts from equipment marked for scrapping.
9. Speed return of scrap to mills and refineries through existing channels. Report regularly on collections of scrap to the Industrial Salvage Committee set up by the War Production Board in your community.
10. Enforce monthly re-checks in every department to find scrap material previously overlooked.

Instrument Laboratory Moves to New Building

● On October 31st The Instrument Laboratory of Seattle moved to new and larger quarters at 926-34 Elliott Avenue West, and the telephone number was changed to ALder 4940.

The Instrument Laboratory's slogan is "If It's an Instrument We Can Repair or Calibrate It." Besides repairing instruments of all types the organization also represents in the Pacific Northwest a number of manufacturers of instruments.

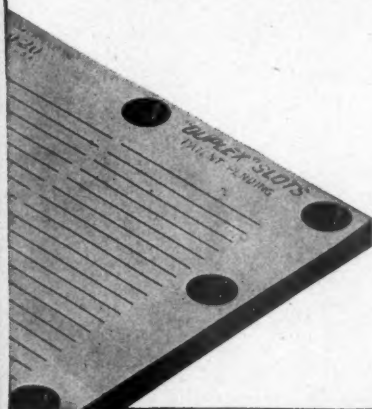
San Francisco's
largest and best located hotel
1000 ROOMS • 1000 BATHS
\$4 one person, \$6 two persons
MANAGEMENT DAN E. LONDON
HOTEL ST. FRANCIS
overlooking
UNION SQUARE

You can get necessary

SCREEN PLATES

provided your operation is essential to War effort or Civilian needs. No Screen Plate orders have yet been deliberately refused by W. P. B.

Send in your necessary orders at once, carefully noting **END USE SYMBOLS** on your order form. If you have any doubts or questions as to procedure, write us and we will supply full information and instructions by return mail.



Fitchburg Screen Plate Co., Inc.

301 SOUTH STREET, FITCHBURG, MASSACHUSETTS

Pacific Coast Representative: Jack Johnson, Holly Acres, Oswego, Oregon



From the thinnest tissue to the heaviest board there is a Hamilton Felt that will do your work better, faster and at lower cost.

the moth out of the wool. Have plenty of ventilation, air not too hot or damp. Install new felts carefully and keep them clean and well adjusted. They will last longer, speed up your production and improve the quality of your product.

WHAT do we mean by sabotage? Anything that impairs industrial efficiency, slows up production or injures the quality of a product. That is sabotage.

A mildewed felt or one that has been the nesting place of moths will slow production and injure the quality of your product. Undue haste or carelessness in installing a new felt often results in the same way. Improper adjustment of tension, uneven wetting, neglect of thorough washing and uniform drying, a loose tack in the deckle tape—these are just a few alien enemies working for the Nazis and the Japs.

Be your own F. B. I. Keep a vigilant eye on your felt stock room. See that original wrappers are unbroken to keep

SHULER & BENNINGHOFFEN • HAMILTON, OHIO

MIAMI
WOOLEN MILLS

Hamilton
Felts

Established
1858

"NON-USERS
ARE THE
LOSERS"

**T
E
N
A
X

F
E
L
T
S**

PROFIT PRODUCERS

EQUIPMENT TIME

The 1941 backlog of paper and board has been used. Already there are signs of renewed demands during 1943 . . . Now is your golden opportunity to renew worn TENAX FELTS. Men and materials will become difficult to get and keep. TENAX FELTS work hard for long hours extending over the months and years.

"Non-Users Are The Losers"

LOCKPORT FELT COMPANY

NEWFANE, N. Y. — U. S. A.

Pacific Coast Representative: ALAN C. DUNHAM, Portland, Ore.



Trona on Searles Lake, California

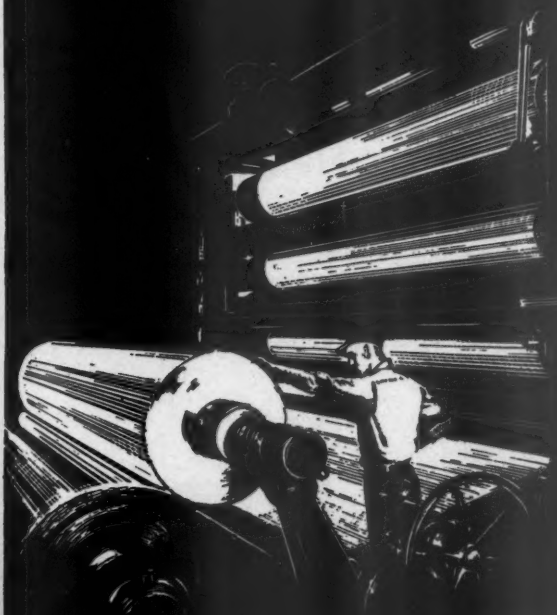
Muriate and Sulphate of Potash • Soda Ash Light and Dense • Borax and Boric Acid
Salt Cake and Desiccated Sodium Sulphate • Bromine

American Potash & Chemical Corporation

609 South Grand Avenue, Los Angeles, Calif.

70 Pine Street, New York City

National Paper Dyes



Fiber as well as color analysis of "samples to match" is part of the everyday work of National Technical Service. Equally practical is the assistance we can render through suggesting the fiber and dye formula that will meet the distinctive use requirements of the sheet that is your current problem.

For the solution of a particular problem or for general technical consultation, National invites your inquiry.

NATIONAL ANILINE DIVISION

ALLIED CHEMICAL & DYE CORPORATION

40 RECTOR STREET

NEW YORK, N. Y.

BOSTON	PHILADELPHIA	GREENSBORO	CHATTANOOGA
PROVIDENCE	SAN FRANCISCO	ATLANTA	PORTLAND, ORE.
CHICAGO	CHARLOTTE	NEW ORLEANS	TORONTO

War jobs helped by
HOOKEE



TRANSPORT DIFFICULTIES OVERCOME



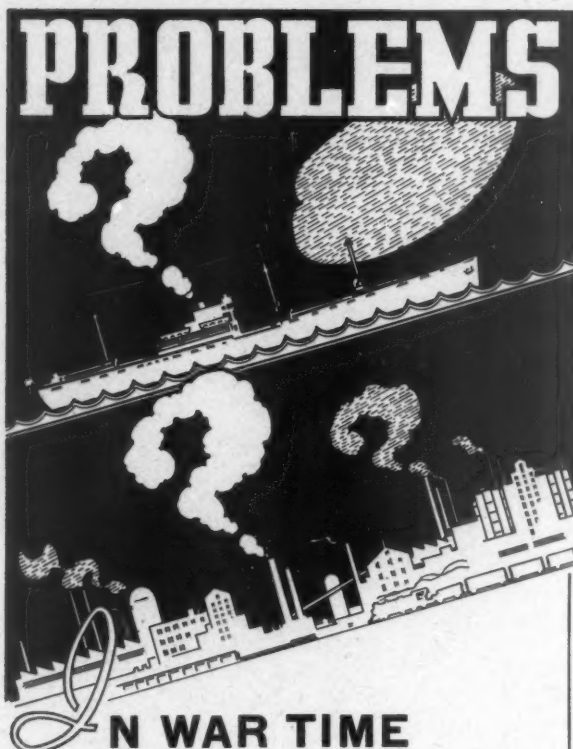
With goods of war flowing out of industry in unprecedented volume, even the best transportation system would be inadequate without suitable containers, wrapping and packaging. Paper products have risen to the occasion, their production in desired volume helped by suitable chemicals. A considerable part of the paper and pulp industry relies on the known uniformity of products produced for this industry by

HOOKEE

On troublesome problems relating to chemicals, consult HOOKEE technical specialists for help within their fields.



3036



Summer engineering skill is coping with the problems of war production with the same vigor devoted to the designing and making of industrial machinery for fifty years. We are working 24 hours a day making steering engines and anchor windlasses for Liberty cargo ships.

IN PEACE TIME

when the war is won, we will have added even more to our skill, experience and equipment for producing efficient machinery for pulp and paper mills, lumber and shingle mills.

IN THE MEANTIME

we are doing our best to help our peace time customers keep their wheels turning, recognizing that pulp and paper mills and sawmills are contributing mightily to winning the war of production.

**Builders of Sawmill, Shingle Mill,
Pulp and Papermill Machinery**

For FIFTY YEARS

**SUMNER
IRON WORKS**
EVERETT, WASHINGTON

*Since
1892*



ESCO

**STAINLESS
STEEL**

SWING CHECK VALVES.

Submit your special valve
problems to our engineering
and metallurgical departments

ELECTRIC STEEL FOUNDRY

2141 N. W. 25th Ave. PORTLAND, OREGON Phone ATwater 2141

SEATTLE
WASHINGTON
2724 1st Ave. South

ESCO

VANCOUVER
BRITISH COLUMBIA
1500 Royal Bank Bldg.

WOOL

IS PRECIOUS



**ORR
FELTS**

**GUARD
FELT LIFE
CAREFULLY**

THE ORR FELT & BLANKET CO.
PIQUA, OHIO

Pacific Coast Representative: Leonard McMaster, Pacific Bldg., Portland, Ore.

Albany Felt Company

Albany, New York

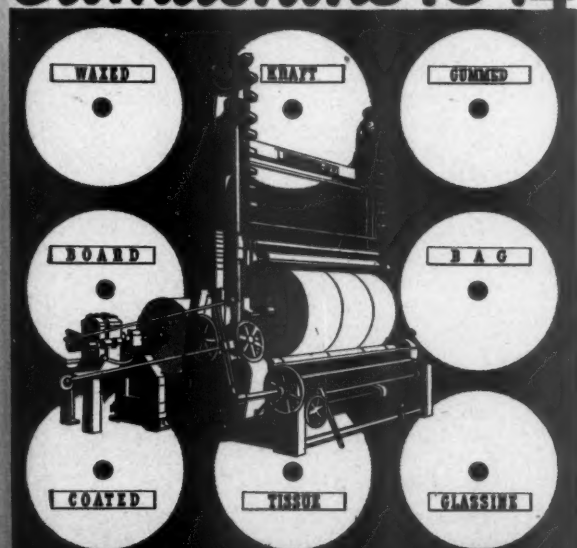
***Manufacturers
of***

Felts and Jackets

For

***Every Type of Paper,
Board and Pulp Machine***

Camachine 10-14



CAMERON MACHINE COMPANY
61 Poplar St. BROOKLYN, N.Y.

A vertical advertisement for Pacific Coast Supply Company. It features a black and white photograph of a tall, multi-story industrial building with several windows, likely a pulp or paper mill. The building is set against a dark, cloudy sky. Overlaid on the right side of the image is white text. At the top, it says "EQUIPMENT" and "RAW MATERIALS". Below that, in a larger, stylized font, it says "For Pulp and Paper Mills". Further down, it says "MACHINE COATING" and "SUPPLY". At the bottom, the company name "Pacific Coast Supply Company" is written in a large, elegant script. Below the name, it lists "SAN FRANCISCO" and "PORTLAND" separated by a diamond symbol.

HESSE ERSTED

Builders of
**PULP and
PAPER MILL
MACHINERY**

PORTLAND



OREGON

PACIFIC PULP & PAPER INDUSTRY

DANDY ROLL STANDS



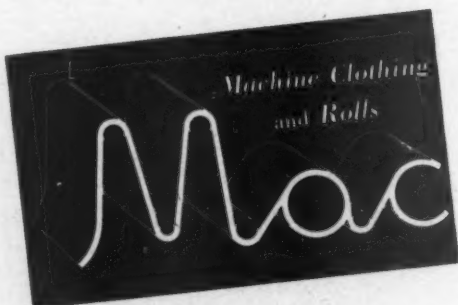
The **SINCLAIR**
Company
HOLYOKE, MASS.



James Symonds, 8337 26th Ave. N. W., Seattle, Wash. NE. 4531

"ASTEN" DRYER FELTS

"CHROMIUM CORP." CHROMIUM PLATING



Representative

Asten-Hill Mfg. Co.
Orr Felt & Blanket Co.
Chromium Corp. of America
American Wringer Co., Inc.

★

Leonard McMaster
Pacific Building
Portland, Oregon
Telephone - Beacon 9354

"ORR" WOOLEN FELTS

"AMERICAN WRINGER" RUBBER ROLLS

UNCLE SAM WANTS ALL THE *Facts*

Advertising today has a solemn duty; namely, to present *all the facts* about a product or service. To marshal those facts and continuously to arrive at new ones stakes out a big job for Research. Year after year, a steady expansion in that direction is going forward at Lindsay. This shows our resolve to furnish all possible information for the use of governmental agencies and others properly interested in the development of Fourdrinier wires.

THE LINDSAY WIRE WEAVING CO.

Serving the Paper Industry Since 1903
14001-14299 Aspinwall Ave., Cleveland

Lindsay **WIRES**



The DRAPER Felt

DRAPER BROTHERS COMPANY
CANTON, MASS.
O. J. LELOFF • VANCOUVER, WASH.



CHEMIPULP PROCESS INC.

CHEMICAL PULPING PROCESSES

Hot Acid Cooking and Recovery Systems
Chemipulp--K-C Digester Circulating Systems
with Chip Distributor and Full Automatic Controls

Chemipulp--K-C Improved Acid Plants
Gas Fortifying High Acid Concentration

Digester Waste Liquor SO₂ Gas & Heat Recovery
Chip Pretreatment Preparatory to Cooking

500 Woolworth Building
WATERTOWN, N. Y.

3311 First Avenue South
SEATTLE, WASH.

- Associated with -

CHEMIPULP PROCESS LIMITED
403 Crescent Building Montreal, P. Q.



Eliminate MANIFOLDING

Multiclone's exclusive vane design permits any number of tubes to be installed with one inlet header and one outlet header simplifying construction and eliminating the complications of manifolding. Less material is needed. Less floor area and less headroom required. Because the gas travels over a smaller surface there is less surface subject to wear and because of the vane type of construction, should wear occur, it can affect only parts that are easily and readily replaceable without dismantling the entire unit. In the Multiclone, the simplified header construction together with the enclosure of the tubes by the hopper greatly reduces heat radiation. This facilitates temperature control, and reduces insulation requirements. Multiclone design makes possible its installation in existing structures in places where manifolding would be impossible. Thus the elimination of manifolding simplifies installation, saves space, decreases wearing surface, reduces heat radiation for better temperature control.

WESTERN Precipitation CORPORATION

Engineers, Designers and
Manufacturers of Equipment
for Collection of Suspended
Materials from Gases and Liquids

Main Office: 1017 West Ninth Street • Los Angeles, Calif.
New York: Chrysler Bldg. • Chicago: 140 S. Dearborn St.
San Francisco: Hobart Building

PRECIPITATION COMPANY OF CANADA, LTD. • DOMINION SQUARE BUILDING, MONTREAL

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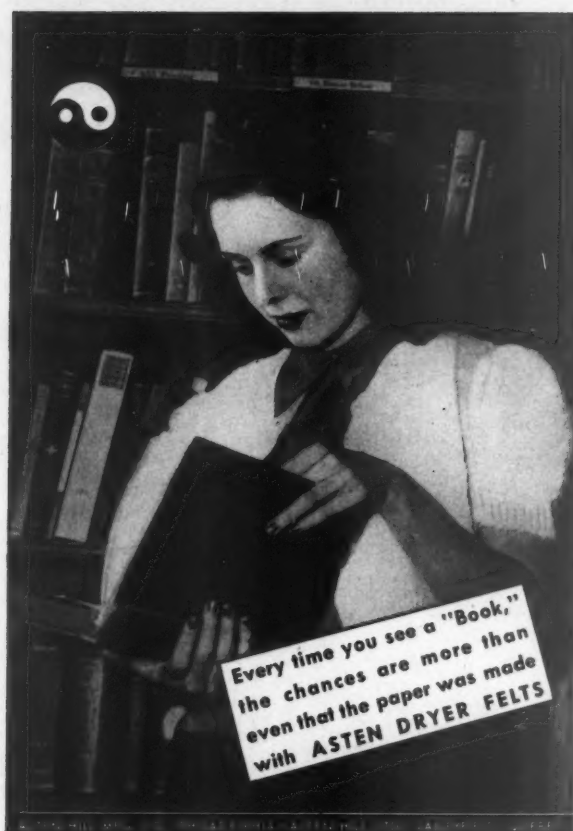
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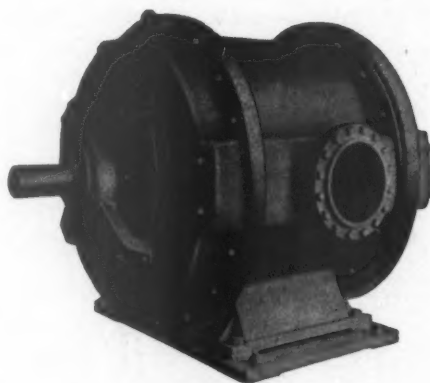
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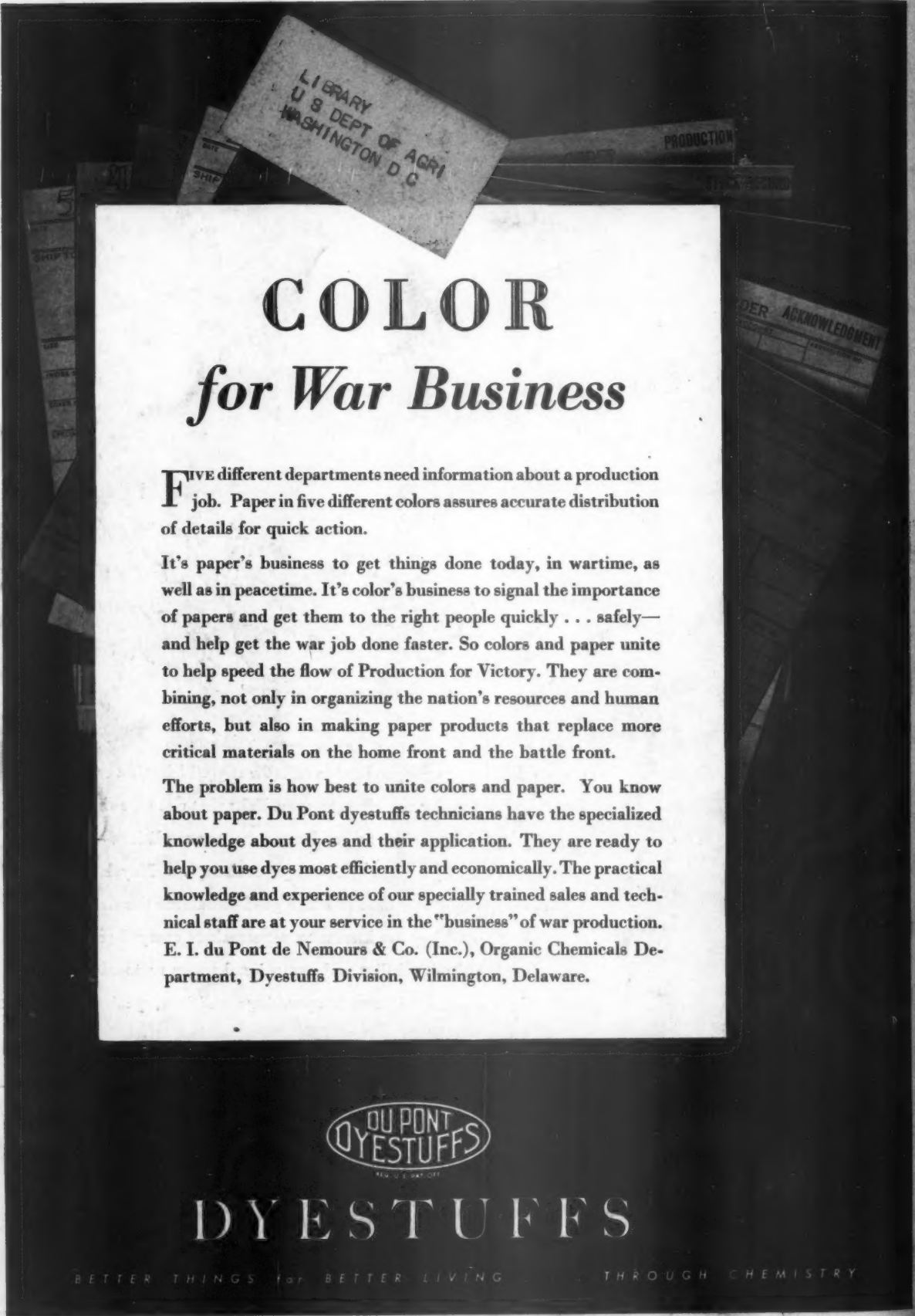
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